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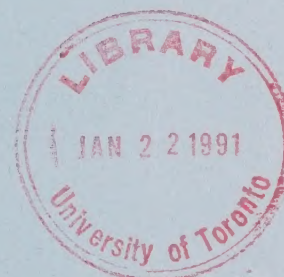
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ENVIRONMENTAL ASSESSMENT BOARD

VOLUME: 276

DATE: Thursday, January 10, 1991



BEFORE:

A. KOVEN

Chairman

E. MARTEL

Member

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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER OF a Notice by the
Honourable Jim Bradley, Minister of the
Environment, requiring the Environmental
Assessment Board to hold a hearing with
respect to the Class Environmental
Assessment (NO. NR-AA-30) of an undertaking
by the Ministry of Natural Resources for
the activity of Timber Management on Crown
Lands in Ontario.

Hearing held at the offices of the Ontario
Highway Transport Board, Britannica Building,
151 Bloor Street West, 10th Floor, Toronto,
Ontario, on Thursday, January 10th, 1991,
commencing at 9:00 a.m.

VOLUME 276

BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman
Member

A P P E A R A N C E S

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NORTHWESTERN ONTARIO
TOURISM ASSOCIATION

I N D E X O F P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>CRANDALL BENSON</u> , Resumed	49523
Continued Cross-Examination by Mr. Hanna	49523
Cross-Examination by Mr. Cassidy	49608

I N D E X O F E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
1638	1:50,000 map of the 1:50,000 photo of budworm salvage operations depicted in photo 121.	49686

1 ---Upon commencing at 9:00 a.m.

2 MADAM CHAIR: Good morning. Please be
3 seated.

4 Mr. Hanna?

5 MR. HANNA: Good morning, Madam Chair,
6 Mr. Martel.

7 CRANDALL BENSON, Resumed

8 CONTINUED CROSS-EXAMINATION BY MR. HANNA:

9 Q. Mr. Benson, yesterday before the
10 break I had asked you to take a moment over the break
11 and check the terms and conditions of the Forests for
12 Tomorrow coalition and indicate to me where in the
13 terms and conditions that the performance or the
14 compliance with the sustained yield measure that you
15 had proposed was set out.

16 And I wonder if you have had a chance to
17 do that?

18 A. Yes, I had, but since that time I
19 forgot the spot. And if I recall, it was really
20 contained within the statements of the objectives where
21 the idea is to manage on a sustained yield basis, and
22 then in the compliance part, it was monitoring the
23 harvesting to see that it fit within the plan that was
24 laid out. So the way that it would be covered would
25 be --

1 Q. Mr. Benson, I appreciate that. I was
2 interested in the specific term and condition, if
3 possible, or the terms and conditions -- the multiple
4 terms and conditions.

5 A. Under the objectives and strategies
6 on page 14 it says:

7 "The MNR shall ensure that each timber
8 management plan contains clear statements
9 of measurable quantified objectives for
10 all resources and a discussion of
11 problems and issues."

12 Q. Now, I just want to make sure that we
13 are looking for the same thing here. Remember we had a
14 discussion and Mr. Martel was discussing with you also
15 the matter of what is the appropriate time frame over
16 which you assess whether there has been overcutting or
17 not.

18 And I believe we've come to a resolution
19 through that discussion that five years would be the
20 appropriate time horizon over which to check to see
21 whether the maximum harvest level that you've used in
22 the procedure that you set had been complied with.

23 And so I'm interested in seeing is there
24 a statement that says, the maximum allowable cut over
25 the five-year period shall not exceed the maximum

1 sustainable harvest as you've described it for that
2 period?

3 A. It doesn't say that directly, but --

4 Q. Well then, let me ask you this then:
5 Is that what you would like though this Board to take
6 away as one of the messages of your evidence, that you
7 would want to see that as a specific term and
8 condition?

9 A. I think that's a valid term and
10 condition.

11 Q. Now, before we rose yesterday we were
12 talking about biodiversity. You recall that discussion
13 I believe?

14 A. Yes.

15 Q. And you had indicated that if you
16 break up the cut with the modified harvesting procedure
17 that you've proposed that this will adequately address
18 biodiversity concerns. Was that the essence of what
19 you were saying?

20 A. As an initial attempt to do that
21 until you get better data that would allow you to do
22 more than that.

23 Q. All right. Let me come back to that
24 in a minute. Now, you had also spoke about the sieve
25 approach, I think, is that the terminology you used?

1 A. The wide sieve.

2 Q. Sorry, the wide sieve?

3 A. Wide sieve.

4 Q. The wide sieve approach as a way to
5 deal with different priorities, for example, area
6 sensitive species and that type of thing; is that
7 correct?

8 A. Correct.

9 Q. And the sieve approach that you're
10 referring to, is that what's contained in Appendix 1
11 and 2, is that the essence --

12 A. In Appendix 2.

13 Q. Appendix 2, okay. And that would be
14 the conceptual presentation of what you mean by the
15 wide sieve approach?

16 A. Right, a conceptual hypothetical
17 approach.

18 Q. Yes, okay. Now, we had discussed
19 yesterday also that as part of that process that blocks
20 be set aside for different priorities, and I think we
21 said a possibility would be we'd set aside 25 per cent
22 of the area for area sensitive species and that area
23 would be managed for those species; is that correct?

24 A. I don't recall a per cent, but --

25 Q. I think I talked about quadrants and

1 said the top left or top right quadrant would be, for
2 example, the area set aside for area sensitive species
3 management.

4 A. Right.

5 Q. Now, before I get into the detailed
6 questions associated with this approach, it would
7 assist me if you could show me where in the FFT terms
8 and conditions that's set out specifically, this wide
9 sieve approach, so I can understand specifically what
10 is being proposed in terms of the final planning
11 process that would implement what you're proposing.

12 Can you show me where the wide sieve
13 approach is basically implemented in the terms and
14 conditions?

15 A. No. They don't have that wide sieve
16 approach in the terms and conditions, rather they've
17 gone to a landscape type of approach which I would say
18 the wide -- before you get to the landscape type of
19 approach, I would say that you could implement the wide
20 sieve approach because that approach would also require
21 more data before it could be implemented.

22 Q. Okay, slowly here now. The wide
23 sieve approach is a forerunner of the landscape
24 approach; is that what I understood you to say?

25 A. The way I see it, yes.

1 Q. Okay. And you said to implement the
2 wide sieve approach we need more data.

3 A. No, to implement the landscape
4 approach as in the terms and conditions you would need
5 more data.

6 Q. So you're saying it can't be
7 implemented now because we don't know enough?

8 A. You couldn't implement it right away
9 without getting more data, no.

10 Q. So the wide sieve approach that
11 you're proposing in your evidence is not, as best to
12 your knowledge, currently contained in the terms and
13 conditions of Forests for Tomorrow?

14 A. Not with that terminology. Certainly
15 the cutting patterns proposed would meet the criteria
16 for the wide sieve approach.

17 Q. Can you list for me the criteria for
18 the wide sieve approach, please?

19 A. Well, basically -- I went through
20 some of these before, but basically what it is is
21 establishing within a given working group what
22 constitutes a diversity line; in other words, what
23 age-class, what age range constitutes a diversity line
24 that you're trying to maintain in that forest.

25 Q. Can we just stop with that.

1 Diversity line, I'm not familiar with that term.

2 A. I think I gave an example before of a
3 rotation of 90 years and if you're trying to maintain
4 diversity in the forest you really wouldn't be
5 practical or is it suitable really to say that the
6 differences in one year in age-class is adequate for
7 diversity.

8 Is it five years, is it 10 years, or is
9 it 30 years. I gave the example, I'll take 30 years,
10 as the division line. So then, with the rotation of 90
11 years you would have three divisions for diversity.

12 Q. Three age-class structures or three
13 age-class groups, is that what you're referring to?

14 A. Three broad age-class groups to
15 maintain the diversity. So that the pattern that you
16 would lay out would be based upon those diversity lines
17 as I term them. How you determine those diversity
18 lines would have to come from a biologist.

19 Q. Fine. That's the first criteria.
20 Are there other criteria for the wide sieve approach?

21 A. The other criteria are then: Well,
22 what is the -- what are the size patterns that you're
23 interested in. And in the hypothetical example they
24 lay out three size patterns from a small pattern of
25 cuts, to medium size, and then to the larger ones for

1 area sensitive species.

2 Q. Okay.

3 A. For the hypothetical example those
4 would be the criteria to go by.

5 Q. And what constitutes a small size
6 pattern for the boreal forest portion of the area of
7 the undertaking?

8 A. Specifically what size?

9 Q. Yes.

10 A. I would rely on a biologist to
11 establish that particular size, but in the terms and
12 conditions of Forests for Tomorrow the size pattern set
13 up in the silvicultural guidelines, the idea there was
14 to establish smaller cut areas and I think what I've
15 tried to show throughout is that more of a pattern
16 approach could be taken to managing the forest and that
17 there could be smaller cuts within the forest than are
18 occurring now.

19 Q. As I understand your proposal though
20 you're looking for a range of cut sizes; is that not
21 correct?

22 A. That's correct.

23 Q. Can you give us any feeling for what
24 is a medium or large size; do you have any -- I realize
25 you aren't a biologist and you aren't here trying to

1 provide that evidence at this time, but can you give us
2 just some general feeling for what you would expect
3 there?

4 A. I think it would have to be adapted
5 to each particular management unit and what the species
6 are in that management unit, and I would feel
7 uncomfortable giving a size without really dealing with
8 the specific area and having a biologist give some
9 advice on it.

10 Q. So as I understand that then, you're
11 saying you would not want to see a provincial standard
12 set down, that it's really something that should be
13 decided on a case-by-case basis based upon the
14 structure of the forest management unit?

15 A. The specific layout within a
16 management unit, yes.

17 MADAM CHAIR: Excuse me, Mr. Benson. The
18 size though is established fairly clearly in Forests
19 for Tomorrow's terms and conditions for certain species
20 of clearcut size?

21 THE WITNESS: Yes, it is. I think
22 because of the -- it depends then upon how you divide
23 up that forest. When I said one to 30 to figure that
24 as an age-class for wildlife, well then if you had a
25 large clearcut area for a species, let's say for

1 example a thousand hectares, it doesn't mean you have
2 to cut that one thousand hectares in one year then, you
3 could still cut it in a smaller cut pattern, but if
4 you're trying to get it into that diversity age-class
5 you could, say, cut it over a period of 15 to 30 years
6 and it's just a matter of placement of the cuts -- the
7 pattern of the cut that you're trying to establish.

8 MR. HANNA: Q. Now, as I understand the
9 wide sieve approach that you've set out here, it's
10 fundamentally designed to address wildlife concerns; is
11 that correct? That's the basis upon which these block
12 sizes have been set out?

13 A. No, not entirely. It's also set out
14 to fit in with the silvicultural proposals by Forests
15 for Tomorrow and also I feel that it would offer better
16 protection for the site by employing those smaller
17 cuts.

18 Q. No, I understand that. I believe my
19 point was that I understand the silvicultural side for
20 the modified cut pattern, but as I understand this,
21 this isn't a modified cut pattern, this is, if you
22 will, a landscape pattern that the cut may add to but
23 it's the way to direct the overall cut in the forest
24 management unit; isn't that correct?

25 Perhaps you can turn to page 419 and tell

1 me what the scale of that is? I interpret the scale of
2 that to be basically a forest management unit. Is that
3 an inappropriate interpretation?

4 A. The way they've laid it out there,
5 no, that would be a forest management unit.

6 Q. Fine.

7 A. But there was no scale on this
8 particular map on the example on page 419.

9 Q. Sorry, I didn't see the scale. Where
10 is that?

11 A. No, I'm saying there was no scale.
12 There was no scale.

13 Q. Oh, I'm sorry. Yes, I understood
14 that. The point is that the individual cuts will be at
15 a much lower scale than what's shown in this graph or
16 what I see in this figure?

17 A. Yes, it could be, depending upon the
18 size of the management unit. This is just a
19 hypothetical example to give an impression of what the
20 area could look like, and certainly if you're trying to
21 apply this to an actual management unit, you wouldn't
22 have such a stylized or rigid pattern established
23 because it would be affected by the lakes in the area,
24 the streams in the area, the roads in the area, et
25 cetera.

1 Q. Now, my question was the pattern,
2 this landscape pattern is designed primarily to
3 respond, as I understand it, to wildlife needs because
4 the individual cuts -- the type of silvicultural
5 concerns you're talking about in terms of regeneration,
6 erosion, and whatever, are operating at a scale much
7 finer than what's shown in this hypothetical example;
8 isn't that fair to say?

9 A. They could be, again depending upon
10 the scale you're working with.

11 Q. Well, assuming that this is a forest
12 management unit for the time being, this is basically a
13 landscape type of analysis in terms of the overall
14 pattern of the forest management unit that you want to
15 achieve, and then within that at a much finer level
16 you're talking about stands and managing individual
17 stands and that's where the modified cut type of
18 approach comes into play. Is that not right?

19 A. That's correct.

20 Q. Now, what I'm interested in knowing
21 is this type of a block stretch here is designed to
22 deal with certain wildlife needs, as I understood the
23 text and understood what the author's basic thrust was.

24 Now, my question is, is right now we have
25 described two types -- or excuse me, three types of

1 size patterns, as I understand it, to respond to the
2 three types of wildlife groups, if I can, and that's
3 the small cut, the medium cut and the large cut.

4 A. Correct.

5 Q. Now, as I understand it then, that
6 you would want to not in a stylized pattern, but you
7 would want to set out your forestry management unit,
8 say: Okay, this area over here is going to be for
9 large area sensitive species, and this is for our
10 medium area sensitive species and this is for our small
11 area sensitive species, or whatever the term might be.

12 That's conceptually what we're talking
13 about; isn't it?

14 A. That's right.

15 Q. Now, I'm interested in knowing what
16 other divisions of the forest management unit are
17 required to deal with things other than wildlife.

18 Like for example, say, we have a high
19 demand in the area for aesthetics. Now, we may not --
20 the medium or the large or the small may not address
21 aesthetics because that pattern is good for wildlife,
22 it may not be good for people, what people like to see,
23 so now we have another area that we need to manage for
24 aesthetics. Would that be a fair...

25 A. A separate area from --

1 Q. Yes.

2 A. It is possible, but I think for most
3 of the boreal forest this pattern of cutting would have
4 some aesthetic appeal for areas that are more
5 aesthetically appealing or have high aesthetic appeal,
6 well then, they should be managed in a particular way
7 to enhance that aesthetic value.

8 Again, it's a matter of determining land
9 use. If you have an area that has a high aesthetic
10 value, then that might be more important to manage for
11 that as a primary use rather than to consider timber as
12 a prime reason for managing that area.

13 Q. Or area sensitive species?

14 A. Well, again, I don't think you would
15 want to say say that for area sensitive species because
16 you have to consider the forest over time in the way it
17 develops, and I think timber management can work with
18 area sensitive species, it's just a matter of timing
19 and making provisions to provide that area for them
20 over the whole rotation period.

21 Q. I don't disagree with you for a
22 moment on that. My point -- all I'm trying to
23 understand is, is within the forest management unit I'm
24 trying to understand your concept of how this would
25 work, and the type of segregations, the divisions that

1 the forest management unit has to be divided into to
2 implement the wide sieve approach.

3 And we have talked about wildlife and
4 we've got three divisions there, and I'm wondering if
5 there's other divisions that are necessary in the
6 forest management unit to deal with many of the other
7 benefits and concerns that are associated with Crown
8 land?

9 A. Well, I think one of the other items
10 I mentioned the other day was if there were rare or
11 endangered species that needed specific habitat, well
12 then, that again might be a separate type of area that
13 you want to look at.

14 If in that particular forest there
15 were -- old growth was an important component, well
16 then, that would throw another change into the system
17 where you would have to try to maintain a certain
18 amount of old growth in the forest over the time
19 period.

20 Q. Okay. So it's fair to say that in
21 addition to the three size patterns that you described,
22 there may well be that many again or more, to deal with
23 some of these other types of issues that you described?

24 A. Depending upon which one it is.
25 There could be a number of special uses that would have

1 to have the management for them to be somewhat
2 different than the majority of the unit.

3 Q. Now, how would you see these blocks
4 being decided upon? The authors make it quite clear on
5 page 419, they say:

6 "Hypothetical distributions are easy, the
7 challenges arise when one comes to
8 placing such concoctions on a real
9 landscape with all the constraints
10 (ravines, rivers, roads, property lines,
11 et cetera)."

12 Now, my question is: How do you put it
13 on the landscape, how do you decide where the blocks
14 go, how big they're going to be, those types of issues?

15 A. Well, you have to have more of a
16 long-range plan of where -- of how you want your forest
17 to develop and it would depend upon the database that
18 you have, not only for the forest but for the wildlife
19 species, that would help to determine where you're
20 going to place those different blocks.

21 Q. Can you give me just a hypothetical
22 example of how you would see that, Take a species or
23 take a forest management unit. And provide me with
24 just some explanation of how you would see that process
25 evolving? Do you have any feeling for that?

1 A. Well, if you have a whole management
2 unit and if you have a certain forest structure on that
3 management unit now and if you set up your goals and
4 objectives for what you're trying to manage that area
5 for, timber and the other resources, that would first
6 help you to determine the amount of area you would want
7 in the different size blocks and the amount of area
8 that you would want to be managed for area sensitive
9 species or where you want to have the more smaller cut.

10 Q. Mr. Benson, maybe this is a chicken
11 and egg issue. My understanding when I set out to you
12 the terms and conditions - I can give you the specific
13 reference if you wish - of the planning sequence that
14 we discussed yesterday, you had said (v) and (vi) were
15 basically an evolution of each other because (vi) would
16 define specifically the objectives, but the objectives
17 set out by the OFAH terms and conditions are a result
18 of deciding on where blocks might go and what the
19 implications of that might be and that, in essence,
20 that decision of the objectives are an evolution of the
21 type of question I'm asking, rather than coming first.

22 How do you come up with your objectives?

23 A. We're talking (v) and (vi) of Forests
24 for Tomorrow?

25 Q. No, I'm sorry. I'm talking about the

1 OFAH terms and conditions.

2 MADAM CHAIR: That's on page 2 of the
3 document, Mr. Benson.

4 MR. HANNA: Thank you, Madam Chair.

5 Q. We've discussed under term and
6 condition 10, subsections (v) and (vi) yesterday and
7 you had indicated to me that the specification of the
8 precise timber and non-timber quantitative objectives
9 was essentially an extension of (v) and I agreed with
10 you on that, but preceding that definition of the
11 specific objectives was a planning process looking at
12 production possibilities, looking at different block
13 sizes, different forest structures, different rotation
14 ages, and a whole variety of things such as that and
15 saying: Okay, here are the choices, that's the one
16 that we choose.

17 Now, as I understood the discussion or
18 the points that you just made, you said: Well, we set
19 up the goals and objectives, and then we would start
20 looking deciding what the block sizes would be and
21 where they would be and how big they would have to be
22 and what pattern they would have to be.

23 Now, the difficulty I have is, I don't
24 see where the goals and objectives came from.

25 A. Well, you're right, it is a bit of

1 chicken and egg process in the planning process and you
2 have to have a start, you have to know -- have an idea
3 for a management unit of what it can produce.

4 Q. Okay.

5 A. And I guess it's a matter of, you
6 can't just sit down and write the final plan, and I
7 think that's the way I was answering you.

8 Certainly if you're trying to produce a
9 plan that's going to show you the range of products
10 that can be produced from the management unit, you
11 would have to consider different layouts in patterns.

12 Q. So is it fair then to say that the
13 sieve approach, while it's a hypothetical approach,
14 simply is a demonstration of the need of the range of
15 possibilities that should be considered when presenting
16 options to the public; in other words, you want to have
17 a reasonable distribution of patterns of forest and the
18 proportions may vary and that may have different
19 implications in terms of the amount of marten you have
20 or the amount of moose you have, but that that
21 provides - how should I say - a general guide in terms
22 of the structures of the possibilities that should be
23 examined?

24 A. Yes, it could, and I think where the
25 difference -- I guess a difference that could occur is:

1 Well, how much area are you going to have for the area
2 sensitive species, or how much area would you have for
3 the other species. That might give you different
4 production of those particular wildlife species.

5 Q. Clearly it would; wouldn't it, if you
6 have more habitat available for an area sensitive
7 species, you're going to end up with more of that area
8 sensitive species on your forest management unit?

9 A. Potentially, yes.

10 Q. And is it not fair then that what
11 should be done is that a range of block or - how should
12 I say - area allocated for the different requirements,
13 for example, area sensitive species - and I will say
14 marten versus moose - that there should be a range of
15 allocations made for those and that that should be
16 presented to the public and the implications presented
17 to them, but the public should be asked to comment on
18 that and provide feedback to the Ministry?

19 A. That's a difficult part of any
20 management plan, how much information can you present
21 for the public to decide upon and how many different
22 alternatives can you present without really swamping
23 them with too much information, and we're just talking
24 here about two factors, and if you have so much variety
25 in your management plan that you have a number of

1 factors, it becomes very confusing. So I think you
2 have to narrow it down and perhaps show a range of
3 options.

4 Q. Dean Baskerville has proposed six
5 production possibilities as a reasonable range. Would
6 that be reasonable, in your view?

7 A. I think the range would probably vary
8 for management units. I think -- I wouldn't want to
9 tie it down to a particular range.

10 Q. I'm just trying to get -- I'm not
11 saying six and six has to be -- you know, we have to
12 live by six as a strict term and condition, but six is
13 that reasonable number, or is 10 a reasonable number,
14 is 600 a reasonable number? I'm just looking for order
15 of magnitude type of what you feel would be reasonable?

16 A. Well, I would say five is a
17 reasonable number, but --

18 Q. Now, as I understand it - or maybe
19 you can clarify this for me, I'll just make sure I
20 understand it - my original understanding was that you
21 would need different silvicultural prescriptions for
22 the different blocks because of the different forest
23 structures that you wanted to achieve.

24 You gave an example, if we were managing
25 an area for caribou which wanted minimum stand size of

1 say a thousand hectares, then we would have -- and they
2 are sensitive of forest structure in terms of, say, a
3 five or 10-year age-class difference, then we would
4 have to change the silvicultural prescriptions for that
5 area to comply with their habitat requirements; is that
6 correct?

7 A. No. It goes back to what I was
8 saying, it's a matter of the spacing and timing of the
9 silvicultural operations and it's a problem with the
10 clearcuts. If you want to produce that habitat of a
11 thousand acres I think you said.

12 Q. Hectares.

13 A. Hectares, then what's the time span
14 that you allow within that 1,000 hectares, does it all
15 have to be exactly the same age or can it be 1 to 30
16 years old, would that constitute the same age-class as
17 far as the caribou are concerned.

18 If it's 1 to 30 years that the caribou
19 will consider to be the same age-class, well then, you
20 could have that area cut over a period of 30 years and
21 you could place your smaller cuts within that larger
22 area over that time period of 30 years and accomplish
23 that 1,000 hectare area.

24 Q. And if it's 10 years, then you might
25 not be able to?

1 A. If you cut one half the area with the
2 small cuts in the first five years and the problem
3 would be, would you consider that the regeneration on
4 those cut-overs was sufficient to provide some
5 protection to the other areas when they're cut, and you
6 would have a problem of: Well, how are you going to
7 get regeneration back on the other one half then too.
8 So that would be a problem.

9 Q. But generally you don't feel this is
10 a major problem. What you're saying is, because of the
11 temporal sequencing of the cut that can be achieved
12 that you can still maintain the structure without
13 having to modify the silvicultural prescriptions that
14 you've described, in most cases?

15 A. Yes.

16 Q. Now, as I understood the purpose of
17 the production functions that you have proposed for
18 both timber and non-timber resources, is to serve as a
19 forecasting tool to understand the implications of
20 alternate silvicultural prescriptions including harvest
21 for a forest management unit; is that fair?

22 A. No. The production functions relate
23 more to the structure of the forest. Basically they're
24 linked to the -- in the example given, they're linked
25 to the rotation age you're using for that forest and

1 assuming that you're going to get an even distribution
2 or the normal forest concept type of forest in the
3 future. They represent again a theoretical maximum.

4 Q. No, I understand that. The point is
5 that we can have alternate forest structures both in
6 terms of rotation age and in terms of spacial pattern,
7 which is also I think you'll agree an important
8 consideration?

9 A. Correct.

10 Q. So we have a wide range of different
11 structures, forest structures that can be achieved on a
12 forest management unit, I think we agreed to that
13 yesterday?

14 A. That's right.

15 Q. Now, as I understood the production
16 functions they would be used as a basis to set the
17 quantitative objectives in order -- in the way of
18 saying: Here's what we can achieve with this forest
19 structure and, therefore, this is the objective we will
20 set. That's the forest structure we want and,
21 therefore, this is the objective we're going to set for
22 whether it's marten or whether it's boreal owls or
23 whether it's more moose or whether it's for timber, and
24 that production function would be the basis upon which
25 arriving at that quantitative objective. Just like

1 your maximum sustainable yield, the same basic
2 principle?

3 A. The same basic principle except when
4 you have more than one, well then, you have to make a
5 choice.

6 Q. I'm well aware of that. I don't want
7 to go back through the compromises and tradeoffs that
8 we talked about before.

9 A. The other part that confused me, I
10 think you used silviculture, the silvicultural method
11 in your question.

12 Q. Yes.

13 A. And I wasn't linking it to
14 silvicultural method.

15 Q. The reason I was adding silvicultural
16 method is that is the management lever we have
17 available to control the forest structure?

18 A. That's right. And the important part
19 I think really is what forest structure are you trying
20 to achieve.

21 Q. I agree, and that's going to be
22 the -- that's the whole premise of all the questions
23 I'm putting to you, it's the forest structure that I'm
24 concerned with not the silvicultural treatments, and
25 the timber management activities are simply a way to

1 achieve that forest structure?

2 A. Exactly.

3 Q. Fine. Now, the production functions
4 are bases to set the quantitative objectives, they say:
5 Okay, just like your maximum sustainable yield, I have
6 a maximum sustainable yield that I can achieve with
7 this forest structure in terms of marten or boreal owls
8 or moose, and on the basis of the forest structure that
9 I choose this is the quantitative objective I'll set
10 for that forest management unit; correct? Is that what
11 we're talking about?

12 A. Yes, and that would give you your
13 maximum possible level, your theoretical potential
14 level.

15 Q. Just like your allowable cut?

16 A. Right. You're providing -- in the
17 case of wildlife you're providing the habitat.

18 Q. There's whole variety of other
19 factors that come into play in terms of whether or not
20 you achieve that?

21 A. Correct.

22 Q. Fine. Now, so we have these
23 production functions and we also have an aim that
24 you've set out which is to maximize net present worth;
25 correct?

1 A. Right.

2 Q. Now, if I have my production function
3 and I have a series of alternate forest structures and
4 I have a overall decision criteria which is net present
5 worth, why do I need the wide sieve technique?

6 A. Why do you need the -- I'm not too
7 sure that I understand the question.

8 Q. I have a production function which
9 says: If I have this forest structure, this is the
10 implications in terms of area sensitive species, this
11 is the implications in terms of moose, this is the
12 implications in terms of fish, this is the implications
13 in terms of timber, this is the implications in terms
14 of aesthetics, whatever I have production functions and
15 I can generate them.

16 I have a net present worth integrator
17 that you've brought forward which says: This is your
18 overall decision criteria, this is the criteria that
19 you will use to select the forest structure; correct?

20 A. That's right.

21 Q. Now, if I have those production
22 functions and I have a decision criteria which is
23 maximized net present worth, why do I need a wide sieve
24 approach?

25 A. I'm still not clear on the question.

1 I think what you're -- maybe if I can just try to see
2 if I understand.

3 Q. Go ahead.

4 A. That you're saying that if you used a
5 present net worth method there would be no
6 justification for using a wide sieve approach?

7 Q. No, I'm saying it would be redundant.
8 The net present worth procedure by looking at the full
9 range of resource benefits that can be achieved from
10 the land base and providing a systematic basis to look
11 at alternate forest structures and choosing a forest
12 structure, that in itself will lead to a certain
13 temporal and spacial heterogeneity of the stand of the
14 forest management unit and that sets out and, if you
15 will, that designs the forest structure.

16 The wide sieve approach, as I understand
17 is, attempting to achieve the same thing. How do we
18 marry the two together?

19 A. Well, I'm still not sure if I
20 completely understand. But I think if you're managing
21 the forest and you have your different options and
22 you're setting those out, you would show what the
23 present net worth is, and I gave a dollar value and I
24 should say that that's not in -- or that I preferred a
25 dollar value, and Forests for Tomorrow certainly has

1 considered not just dollar values in their approach to
2 present net worth. The dollar value is my own
3 personal preference.

4 Q. Fine.

5 A. But I think your alternatives, where
6 you were showing if included your area sensitive
7 species and your other species, would have present net
8 worth values associated with them.

9 Q. Right.

10 A. And would help you in making that
11 decision.

12 Q. I agree.

13 A. Now, I don't know whether it would
14 really -- how the figures would work out, to tell you
15 the truth.

16 Q. I'm trying to -- what you've said I
17 agree with, and that was the point of my question, is
18 that if you assign a net present worth to area
19 sensitive species and to whatever other considerations
20 you want to assign that value to and you look at
21 alternate forest structures and use that criteria as
22 your decision in choosing the appropriate structure,
23 what is the role then of the wide sieve approach that
24 you've brought forward in that process?

25 A. Well, the role of the wide sieve

1 approach is that you're providing the forest structure
2 for a variety of species. So that you --

3 Q. Let's just stop there for a minute.
4 But that suggests that using your maximum net present
5 worth criteria will not achieve that?

6 A. No, I don't think it does, because if
7 you consider that the -- achieving the diversity or
8 achieving the possible habitat for a wide number of
9 species is a beneficial item, well then, that should
10 increase your present net worth.

11 Q. I agree, and that's my point, is that
12 if there is a benefit to that, that will show up in
13 your net present worth and, in fact, if that benefit is
14 large, you will end up with a very diverse and
15 responsive plan to wildlife concerns, particularly if
16 they turned out to be more valuable than timber--

17 A. Right.

18 Q. --in some circumstances. So the
19 point is, is that that evolves from the decision
20 criteria that you've set forward, the net present worth
21 criteria, the process that you've described there.

22 What role does the wide sieve approach
23 play, because the result of your present net worth
24 exercise may well be the wide sieve structure in a
25 specific forest unit, forest management unit.

1 A. Okay. I think maybe we're arguing a
2 couple of different points there. The wide sieve
3 approach -- I was looking at it as not just achieving
4 wildlife but also achieving silvicultural and
5 protection of the other environmental features, not
6 just for wildlife. So it was -- it was the operating
7 area within which I was considering that the present
8 net worth would be applied.

9 Q. I just want to make sure I
10 understand. You're saying there are certain factors
11 that would not included in your net present worth
12 criteria?

13 A. No, no. I'm saying that the method
14 of applying the management to the area would be
15 initially the wide sieve approach. Now, when you're
16 looking at managing the whole management unit, how are
17 you going to manage the particular areas, well that's
18 where the present net worth would help you determine
19 that part.

20 Q. Perhaps then just to finish this, I
21 think we've gone far enough on it. You see the wide
22 sieve approach as being perhaps as an initial guide in
23 terms of assisting forest planners in developing the
24 range of forest structures that should then be
25 considered through your net present worth procedure; is

1 that how you see it serving?

2 A. I see the wide sieve approach as an
3 initial way to better determine the structure of the
4 forest that you want that's going to provide a
5 diversity of habitat and also provide protection to the
6 other features of the environment.

7 How long it would be necessary to apply
8 such a method, I think, would depend upon how long it
9 took to develop a better method. And the present net
10 worth is merely a manner of evaluating for the forest
11 particular treatments or procedures that you want to
12 apply over time.

13 Q. Now, when you started out this
14 discussion you made one other statement I just wanted
15 to clarify. And you said that until we get better data
16 to allow us to do more than the wide sieve approach, we
17 should use the wide sieve approach; we didn't have
18 enough data to implement the landscape approach, I
19 think was the --

20 A. That's right, or really the FEC
21 approach. I don't think --

22 Q. All right. Now, what would you
23 propose that we use as the measure to determine when
24 we've got enough information to move to another system?
25 We will never have enough information, you'll agree

1 with that, we'll always want more information.

2 A. I think -- no, I don't agree with
3 you. If you spend your time wanting more information
4 all the time, you'll never get anything done.
5 You do have to make decisions sometimes.

6 If you spend all your time wanting more
7 information, you'll never get the job done, and that's
8 really why I was saying the wide sieve approach would
9 be an approach you could initialize at the start
10 because it does manage to address some of the issues
11 without having the detailed information available.

12 Now, detailed information: How much do
13 you need? Again, that's going to vary from area to
14 area, species to species.

15 Q. But just a second, Mr. Benson. You
16 have made the determination that we don't have adequate
17 information, that has been your evidence.

18 Now, my question is: How will -- when or
19 how do you propose that we will determine when we have
20 enough information to start moving beyond a very broad
21 and course approach such as the wide sieve approach?

22 What measure would you propose that this
23 Board use to make that determination maybe five years
24 from now when we come back and say: Well, now we've
25 got enough information, we can move forward. How would

1 you make that determination, what would be the criteria
2 that you would use to decide we have enough
3 information?

4 A. To use a different approach. Enough
5 information to use a different approach?

6 Q. Enough understanding of the
7 relationships that presumably we don't have enough
8 understanding of at the present time.

9 A. Well, this depends upon establishing
10 research on the area to collect the information that
11 you want and once you have enough research: Now, what
12 is enough research?

13 Q. That's my question exactly.

14 A. Now, that's a difficult one because I
15 think it's when the people that are involved in the
16 management feel that they have enough confidence in the
17 research that has been done that it will -- can be
18 applied in the field and will work and achieve the
19 results that it says it will.

20 Q. But, Mr. Benson, if you don't have
21 that information that doesn't remove those issues from
22 the table; does it?

23 A. Of?

24 Q. The issues are still there even if
25 you don't have the knowledge?

1 A. That's right.

2 Q. And would you agree that the best
3 approach is to use the best available information in
4 the most explicit and quantitative way possible?

5 A. Yes.

6 Q. Is there something wrong with that?

7 A. There's nothing wrong with that.

8 Q. I would like to look at the
9 transcripts at Volume 270, page 48756, and this
10 discussion had to do with the matter of multiple
11 management plans for a single land base. And I believe
12 you are proposing that it would be much better to have
13 a single management plan for a particular area;
14 correct?

15 MADAM CHAIR: What page is that?

16 MR. HANNA: 48756, Madam Chair.

17 THE WITNESS: So I'm talking about in
18 that context the whole management unit and the concept
19 that you wouldn't want to have a timber management
20 plan, a fisheries management plan, et cetera, right.

21 MR. HANNA: Q. Now, in making this
22 proposal are you proposing that such a plan for a
23 forest management unit - that would include matters
24 other than just timber but wildlife and fisheries -
25 would that plan and that planning process include

1 matters such as setting seasons, creel limits, those
2 types of issues, or are you looking at a management
3 plan that would deal with those components of the other
4 non-timber values that are affected by the timber
5 management activities and the forest structure that
6 they imply?

7 A. The way I was looking at it was the
8 timber management part of it, how it would affect the
9 other resources.

10 Q. Fine. Now, I would like to look at
11 your witness statement, the end of Chapter 4, and you
12 had listed, I believe we discussed briefly, it's on
13 page 59, these four planning elements -- necessary
14 planning elements that you've set out.

15 And I just wanted to confirm that you
16 would agree that the use of guidelines - and I'm
17 speaking here particularly of the moose habitat
18 guidelines - that if the moose habitat guidelines were
19 to be applied consistently and rigorously across the
20 area of the undertaking, that that would not replace
21 the need for these four planning elements that you've
22 set out here?

23 A. No, they wouldn't.

24 Q. And I wonder if you would agree with
25 me that the very fact of using something like the moose

1 habitat guidelines can tend to obfuscate the very
2 essential planning elements that you've set out here on
3 page 59 by attempting to role into those one set of
4 prescriptions the four essential elements that you've
5 set out here?

6 A. It certainly narrows down how you're
7 going to manage the area. Well, it's ignoring the
8 other uses, it's not really considering -- or it's
9 assuming that it's going to provide -- I believe for
10 the wildlife, it's assuming it's going to provide
11 habitat for a certain number of species, et cetera.

12 Q. Mr. Benson, I wasn't asking to get
13 into the wildlife side of it, I was simply talking
14 about these four planning elements. Let's me start
15 again on it.

16 You set out here, for example:

17 "The determination of production levels
18 possible for each resource of a
19 management unit."

20 And let's just for a moment assume that
21 we have guidelines for every species in the boreal
22 forest -- in the area of the undertaking, just as a for
23 instance, and we'll just deal with moose for right now.

24 And the moose guidelines say: Here's the
25 cutting pattern that you should use to achieve for

1 moose. Now, that wouldn't satisfy your first planning
2 element; would it, which is determination of the
3 production levels possible?

4 A. No, it wouldn't.

5 Q. Because it would already have been
6 fixed by the very fact that you said here's the cutting
7 pattern, it's independent of what the production level
8 might be?

9 A. That's right.

10 Q. The same thing with No. (b), it's
11 independent of what the users of the forest might be
12 requiring?

13 A. That's right.

14 Q. So the guidelines violate the basic
15 planning elements that you've set out here because they
16 don't deal with them as explicitly as you've said is
17 necessary?

18 A. That's right.

19 Q. I would like you to look at OFAH
20 terms and conditions 166, 167 and 168. That's on page
21 29.

22 A. This is of the...?

23 Q. OFAH terms and conditions, Exhibit
24 1637. And in looking at this, I just want to make it
25 clear to you that I'm not asking you for your comment

1 on the featured species approach to wildlife
2 management, but rather how to deal with this issue of
3 guidelines and production levels.

4 So if you would just take a moment, read
5 those three terms and conditions, and then I'll ask you
6 the questions.

7 A. Okay, the numbers again? We're
8 starting at 167?

9 Q. 166, 167, and 168.

10 A. Okay.

11 Q. Now, before I begin this discussion I
12 want to bring to your attention the fact that we're
13 placing -- intentionally placed the term guidelines
14 with design manuals, and the importance of that is that
15 a design manual is intended to be used as an
16 assistance, a technical reference manual in terms of
17 the habitat requirement of the species without
18 specifying this is what you should do. Do you
19 understand the difference? That's an important
20 difference, I just want to make sure you understand
21 that difference.

22 A. I believe I've got understanding. It
23 relates to your use of the FEC too, I presume.

24 Q. No. It relates to the habitat supply
25 analysis approach that the OFAH is proposing which is

1 independent of the FEC proposal that has been put
2 forward by OFAH to deal with biodiversity.

3 A. Okay.

4 Q. Now, if the guidelines were converted
5 to manuals as described here so that the manuals became
6 a basis, a technical basis upon which to evaluate
7 alternate forest structures, basically the technical
8 supports for the production possibility type of
9 procedure that you have proposed, would that be a way
10 to maintain the necessary planning elements that you've
11 set out at the end of Chapter 4 and could still make
12 the best use of the technical information available in
13 terms every wildlife habitat requirements?

14 A. For point No. (a) of mine on page 59?

15 Q. (a), (b), (c) and (d)?

16 A. It wouldn't -- because they're
17 limited to moose and deer, it wouldn't satisfy points
18 (b), (c) -- from (b) on.

19 Q. Okay, I'm sorry. Well, perhaps I was
20 trying to limit this. I did not want to get into a
21 discussion of the featured species versus alternate
22 ways to manage wildlife, but perhaps you should clarify
23 to me why (b), (c) and (d) would be violated?

24 A. Well, from what I understand of these
25 they're saying that these are for moose and deer

1 habitat design, so that if you set and use those it
2 would give you an idea of what the production levels
3 would be for moose and deer.

4 Q. Yes.

5 A. Well then, that would satisfy part of
6 (a) because you would have determined the production
7 levels possible for those two specific resources.

8 Q. Right.

9 A. But you wouldn't have determined it
10 for the other resources of the area.

11 Q. Right.

12 A. So that's -- when you move down to
13 point (b) then, the production levels desired by the
14 users of the forest, well you only have two production
15 levels then.

16 Q. But you could still present those
17 production levels to the users of the forest and ask
18 them what is the level of moose and deer that you
19 desire, notwithstanding there may be other production
20 levels they may require, but that would still be
21 consistent with the necessary planning elements with
22 respect to those species at least?

23 A. Yes. Well, this is a component. I
24 think the critical part is, is that this is two
25 features of the unit that you're establishing

1 production levels for.

2 Q. Right.

3 A. And there may be other--

4 Q. Fine.

5 A. --items that you want levels for.

6 Q. And just for your information, 171 --
7 term and condition 171 requires those design manuals to
8 be developed also for pine marten and pileated
9 woodpeckers to try and deal with the area sensitive
10 species in the area, but I don't want to get into the
11 featured species discussion with you, we'll reserve
12 that for Panel 9.

13 Can we look at (c) and (d) in your
14 report. Are (c) and (d) violated by what's proposed
15 there?

16 A. Again, it would be the same argument,
17 if you're not considering all the resources of the
18 area, you're not going to maximize user satisfaction.

19 Q. Can I ask you then, if I take that
20 statement to its full extent, is it fair to say then
21 that one requires a production function for every
22 living organism and perhaps some inanimate components
23 of the forest, and that those must be all presented in
24 a formal way to the public in order for the public to
25 arrive at a decision?

1 A. No, they don't have to -- I don't
2 think they all have to be presented to the public.
3 Ideally it would be -- I would think it would be ideal
4 if, for a management unit, the managers had that
5 information so they could determine what it is they're
6 doing to the management unit.

7 Q. But that ideal isn't achievable; is
8 it?

9 A. If you wanted to take a look at all
10 living organisms it certainly is not achievable right
11 now.

12 Q. Or the foreseeable future. Every
13 protozoan, every bacteria. Really, you know, like,
14 isn't it a little bit stretching the imagination, a
15 production function for pseudomonas?

16 A. I think it depends how large an
17 imagination you have as to whether it's stretched or
18 not, but certainly the way science has been going this
19 century, it's been expanding rapidly and it's difficult
20 to say whether we would have that information.

21 Q. All right. As an initial measure,
22 would you agree it's better to do at least for those
23 that we have good information on and add them as better
24 information becomes available for other species, or
25 would you just ignore everything we have until we have

1 got complete information and then start dealing with
2 production function?

3 A. No, you have to work with the
4 information that you have and where you perceive that
5 you need more information, well then, you would try to
6 get that information.

7 Q. Okay. Now, back to this matter of
8 the guidelines and the habitat design manuals as we set
9 out here.

10 Would you agree that it is preferable to
11 have design manuals of the sort that I've set out here
12 that has been -- that I haven't set out, that the
13 Federation of Anglers & Hunters have set out, rather
14 than a guideline type of approach that we have just
15 agreed violates your four basic planning elements?

16 A. Well, this is another approach which
17 has its merits. The information that I have seen that
18 I thought was useful for managing an area, a good
19 example is the reference I gave to the U.S. Forest
20 Service.

21 Q. Their habitat suitability indices and
22 habitat suitability models?

23 A. I -- forget the exact title. It's
24 where they -- it's for Western Oregon, their manual for
25 Western Oregon, two parts.

1 Q. Yes. Woodmount.

2 A. Where they do try to identify the
3 different habitats features required for the different
4 species.

5 Q. I would like to turn now to Chapter 7
6 of your report.

7 MS. SWENARCHUK: Sorry, what page,
8 please?

9 MR. HANNA: Page 100.

10 Q. And I think it's fair to say that a
11 major message that is contained in this chapter and in
12 much of your evidence you've presented is that you're
13 advocating modified cuts and smaller clearcut areas;
14 correct?

15 A. Correct.

16 Q. Now, the question I have is: If the
17 four essential planning elements that we've just
18 described at the end of Chapter 4 are followed
19 diligently and reasonably in the timber management
20 planning process and that the implications of a
21 reasonable range of alternate forest structures are
22 presented - and those alternate forest structures may
23 include a modified harvesting pattern of the sort that
24 you're describing and perhaps areas with larger
25 clearcuts, smaller clearcuts, a range of different

1 forest structures that can evolve - and the
2 implications are fully set forward, do we need a limit
3 in terms of clearcut size?

4 A. I think we do.

5 Q. Why?

6 A. For the reasons specified in Chapter
7 7, because of the potential ecological damage that can
8 occur to the site; and, in addition to that, I would
9 prefer the smaller cut areas to encourage more natural
10 regeneration because of the lower cost element
11 involved.

12 Q. Well, let's deal with that one first.
13 If the evaluation of the alternate forest structures
14 and in order to achieve those alternate forest
15 structures you'll agree there's a suite of
16 silvicultural activities that are required to achieve
17 that; agreed?

18 A. Yes, there can be.

19 Q. So that -- and if the analysis of
20 that timber management plan includes a complete
21 evaluation of the costs and benefits of those
22 silvicultural alternatives, then the lower costs you're
23 suggesting will arise from that will become very
24 apparent; won't they?

25 A. In the way that the -- from the

1 silvicultural treatments, yes.

2 Q. So that if a reasonable range of
3 alternatives is considered and the full costs and
4 benefits of the alternatives is presented, why will
5 that not achieve the end that you're desirous of and I
6 can assure you my client is desirous of also, without
7 potentially straight jacketing us into what may be too
8 large of clearcuts or what may be too small of
9 clearcuts depending upon the circumstances that we're
10 looking at?

11 A. I'm not clear on that question, I'm
12 sorry.

13 Q. Okay. Let me try it again. If we're
14 looking at a reasonable range of alternatives in terms
15 of the forest structure and if those alternatives don't
16 just include conventional timber harvesting as we know
17 in the province today, but they do include the types of
18 modified harvesting techniques that you're proposing
19 and that the full costs are presented in the net
20 present worth type of criteria that you're proposing
21 for the different alternatives, does that not address
22 your concern about natural regeneration being cheaper
23 and being more cost effective and all of the other
24 benefits that flow out of that without having to
25 straight jacket us into a clearcut size, say, it's a

1 hundred hectares when a hundred hectares may in some
2 circumstances be appropriate, in other circumstances
3 may be too large, in other circumstances may be too
4 small?

5 A. Do you mean appropriate for what
6 purpose?

7 Q. Achieving your maximum net present
8 value, as an example.

9 A. So I'm making the presumption that if
10 you cut the area smaller or larger than that that would
11 change your net present value--

12 Q. Absolutely.

13 A. --as far as silviculture goes.

14 Q. No, as far as the management plan in
15 total goes. As I understand it, net present value
16 applies to all benefits and costs associated with a
17 timber management plan; is that not correct? I thought
18 you'd agreed to that.

19 A. Correct.

20 Q. So it applies to everything?

21 A. Okay. When we looked at the
22 silvicultural guidelines, we tried to set them up to be
23 silvicultural guidelines that would achieve natural
24 regeneration, so with that particular idea the
25 assumption then is, is that if you stray too far from

1 that that you're not going to achieve as much or as --
2 the desired type of natural regeneration and if you
3 didn't achieve that, what you wanted, well then, your
4 net present value would be lower.

5 Q. I agree.

6 A. So what I'm saying is that it does
7 relate to the net present value because by trying --
8 you're trying to use the silvicultural methods that are
9 going to give you the best results that you want, and
10 we tried to lay out the ones that we thought would
11 achieve the desired results.

12 Q. I put a paradigm to you yesterday and
13 it was: There's two ways to come about an issue, one
14 is to say: This is what we want you to achieve, and
15 the other is to say: This is how we want you to do it.

16 And I see the silvicultural prescriptions
17 being a way of saying: This is how we want you to do
18 it; the net present worth and quantitative objectives
19 being a way of saying: This is what we want you to
20 achieve. Do you see the difference?

21 A. The silvicultural guidelines is
22 certainly a restriction on the cut size.

23 Q. It says how to do it.

24 A. It says how to do it right.

25 Q. It doesn't say what that necessarily

1 is going to achieve. Implicitly it does, what you
2 described, but it doesn't say specifically -- you can't
3 say to me: If you do this, this is the quantitative
4 result you will have in terms of moose?

5 A. No, you can't, because the management
6 of an area is a package and I'm not quite sure what
7 you're arguing, but you have to try to make it all fit
8 together and --

9 Q. And that's the purpose of your aim of
10 using a net present value measure?

11 A. That's right, as an end measurement.

12 Q. Right. Now, the problem that I can
13 anticipate is this, is that we have a net present value
14 criteria that you've set forward as saying: This is
15 the aim that we should have in timber management
16 planning in the province; correct?

17 A. Correct.

18 Q. So we have that as the measure that
19 we use when we are selecting among alternative forest
20 structures, but we have another constraint that's
21 coming into play, and the other constraint is you must
22 use the following silvicultural techniques.

23 It may be that if I use those certain
24 silvicultural techniques that you -- for example, the
25 size of clearcuts, I may not be able to achieve the

1 maximum net present worth, they may be in conflict.
2 Do you see that?

3 A. It is conceivable under certain
4 circumstances, yes, it wouldn't give you the right
5 value, and I think I said the other day too that I was
6 in general agreement with the silvicultural guidelines
7 that were laid out there, and --

8 Q. The general -- laid out where, sorry?

9 A. In the Forests for Tomorrow.

10 Q. Okay.

11 A. And I had a hand in putting them
12 together. But I also said that you don't want to tie
13 the hands of the unit forester, you have to allow
14 methodologies to develop and you have to allow
15 adaptation to particular areas.

16 Q. So would it be fair to say then that
17 you see the silvicultural guidelines being similar to
18 what we have now in terms of the poplar guidelines and
19 the spruce guidelines and the jack pine guidelines and
20 the red pine guidelines and the white pine guidelines,
21 and whatever other guidelines we have, that they
22 provide a technical reference manual for foresters to
23 understand the silvics of a species and management
24 options that can be used to effectively manage stands
25 of that nature, but they don't prescribe: This is what

1 you have to do, this is the range of techniques you
2 should look at?

3 Is that the type of - how should I say -
4 basis that you would want to see the silvicultural
5 prescriptions you've described be used?

6 A. The silvicultural prescriptions we
7 laid out were trying to address the problem of
8 regenerating the area, regenerating at a low cost,
9 protecting the habitat and providing wildlife,
10 providing better aesthetics, trying to address a number
11 of issues of what silvicultural methods will best
12 achieve as many of these items as possible as a general
13 approach to managing the area. And that's what we came
14 up with looking at all those different factors.

15 I think the terms and conditions do
16 include provisions there for larger area clearcuts
17 where it's specified as necessary by biologists, it
18 also notes in the terms and conditions that the more
19 intensive silvicultural can be practised where it can
20 be shown that the present net worth makes it
21 worthwhile.

22 The general thrust of it though was to
23 try to make the point that, for the reasons I mentioned
24 at the start, that the smaller clearcuts would help to
25 meet those particular factors, that of lowering costs

1 by achieving natural regeneration and of providing
2 better and more diverse habitat and protecting the
3 ecological features of the area.

4 Q. Can we leave it at this then: If
5 there was a situation that arose wherein the net
6 present worth criteria and the silvicultural
7 prescriptions that you've set out were in conflict that
8 the net present worth criteria would be given priority;
9 which should we rely on in those circumstances?

10 A. Well, the way I set it out we'd be
11 relying upon the net present worth, but I can't quite
12 visualize your model.

13 Q. That's fine.

14 MADAM CHAIR: Time for our morning break,
15 Mr. Hanna.

16 MR. HANNA: Certainly.

17 MADAM CHAIR: Mr. Benson, one issue that
18 the Board would - and the last response you gave
19 brought it to our attention. Mr. Hanna, are you going
20 to be investigating with Mr. Benson his assumptions
21 about why natural regeneration will be cheaper as an
22 overall silvicultural treatment?

23 MR. HANNA: No, I won't, Madam Chair.

24 MADAM CHAIR: All right. Then we won't
25 bring it up here, we will wait until it comes up.

1 ---Recess taken at 10:20 a.m.

2 ---On resuming at 10:40 a.m.

3 MADAM CHAIR: Please be seated.

4 Go ahead, Mr. Hanna.

5 MR. HANNA: Q. Mr. Benson, I would like
6 to look at the matter of clearcuts from a slightly
7 different point of view now, and I 'd like to look at
8 it from this perspective; that is, the definition of a
9 clearcut. And there was I believe some discussion
10 through your evidence, your evidence-in-chief in terms
11 of the definition of clearcuts.

12 And just as a point of departure, if you
13 could get out transcript 270, Volume 270, page -- I'm
14 sorry, 271, excuse me, page 48936, and this was during
15 I believe your slide presentation, and Madam Chair
16 asked you a question starting at line 12, and she
17 indicated:

18 "But would we call an area that was cut
19 50 years ago a clearcut, I mean, if it
20 were regenerating for 50 years that's not
21 a clearcut anymore is it?"

22 And you went on and said:

23 "It depends on when you stop cutting a
24 cut-over..."

25 I think you meant calling a cutover,

1 "...calling a cut-over a cut-over because
2 basically if you have manage a management
3 unit on a clearcut basis eventually it is
4 all one clearcut."

5 And so basically what you're saying is
6 there's a definitional problem in terms of where a
7 clearcut stops and starts?

8 A. Right, and it relates to the wide
9 sieve approach again and when I talk well, what is the
10 age class difference, it really really is an important
11 diversity.

12 Q. Yes, okay. And I believe a similar
13 question was asked of you by Mr. Martel when you were
14 showing slide 346 - and I don't know whether you want
15 to refer to 346 - but it was one where there was a
16 strip cut and they come back and done a return cut, and
17 the return cut was wider than the initial strip cut,
18 Mr. Martel made reference to the fact that there was a
19 green strip in the background with, I think, it was
20 white birch in the front, and he said:

21 "Is that adequate regeneration to start
22 another cut."

23 I think that was the essence of his
24 question.

25 MADAM CHAIR: Is that the Kiashke

1 Management Unit?

2 MR. MARTEL: No, but that is the
3 question.

4 THE WITNESS: Yes, it was for the Kiashke
5 Management Unit.

6 MR. HANNA: Q. Okay. And I think the
7 point was that Mr. Martel was looking at the vegetation
8 in the background and saying, is that high enough to
9 allow a second cut to occur. That was the essence of
10 what I understood what he was saying.

11 Now, the question that I would like to
12 put to you is, there's two ways to define when we can
13 come back and cut again: One would be upon age, in
14 other words, period of time since the first cut; a
15 second way would be based upon the structure of the
16 vegetation itself, regardless of age.

17 There are two different -- you'll agree
18 that those are two different approaches?

19 A. I'm not clear as to what you mean by
20 the structured part and the way it would affect --

21 Q. Height and density of vegetation that
22 has regenerated in the cut strip.

23 A. Yes, okay.

24 Q. Now, you would agree that the height
25 achieved by different species differs significantly; a

1 poplar may reach 15 metres in the period of time it may
2 take a spruce to reach five metres?

3 A. You will find differences between
4 species on a given site and differences for the same
5 species on different sites.

6 Q. Right. And from considerations such
7 as non-timber benefits, particularly wildlife, visual,
8 those types of concerns, it's not the age of the stand
9 that's as important as the structure, the height, the
10 density of the trees and the height of the trees is
11 most important; would you agree with that?

12 A. It's also important for silviculture
13 too.

14 Q. The height?

15 A. It can be, yes.

16 Q. Fine. But it's also -- it's primary
17 of importance certainly, notwithstanding it's of
18 silvicultural importance, but it's of primary
19 importance in terms of visual quality and in terms of
20 wildlife. Would you agree with that?

21 A. I would agree with that.

22 MR. MARTEL: Is free to grow, is that --
23 because it's spread over a period, you know, it's not
24 always the same, could that be the time at which a
25 second cut might occur, when the first area has been

1 designated free to grow? Does it provide enough
2 protection for the wildlife that's there at that age,
3 or is it still too small?

4 THE WITNESS: From the biologists I have
5 talked to, most of them would prefer to leave it
6 somewhat longer than the free to grow stage, but I
7 would prefer to have a biologist speak to that
8 particular part.

9 MR. HANNA: Q. Now, the part of this
10 question involves what we had a discussion before the
11 break about in terms of definition of clearcut sizes
12 and that sort of thing, and one of the questions with
13 clearcut sizes is: When does a clearcut stop and
14 start; do you agree with that?

15 A. Right. I'm just thinking: Well,
16 what are the -- where do you draw the boundary line
17 based upon what you're talking, before the structure or
18 the age of the adjacent area that was cut.

19 Q. Yes. And as a specific example, one
20 of the FFT terms and conditions for jack pine stands is
21 that the clearcut should not exceed a hundred hectares;
22 correct?

23 A. Correct.

24 Q. How adjacent can the next hundred
25 acre clearcut be and not be part of that hundred acres

1 that's already been clearcut?

2 A. So you're getting into the spacing
3 problem when you're asking that question?

4 Q. Yes.

5 A. And, again, I would like to see an
6 area in a case like that as large as the area that was
7 cut between those two cut-over areas.

8 Q. And when can you cut the intervening
9 space?

10 A. That's where the biologist would come
11 in to say, if you want to manage that area to include
12 biological diversity, that's when the biologist would
13 give you the advice on when that second cut should
14 occur. Or if you have any of the models in place that
15 can tell you that, well then --

16 Q. The production possibility models is
17 what you're referring to?

18 A. Well, I think both models, the models
19 that you're looking at and Forests for Tomorrow are
20 looking at, all involve higher level of knowledge than
21 what we have now that would presumably contain
22 information that would tell you how you're going to
23 manage these areas and what the leave period would be
24 for different sites. So you would have that
25 information available ideally.

1 Q. In your proposal that the intervening
2 area should be equal to the size of the area cut
3 between clearcuts, you would agree that that also is
4 something that may change on a case-by-case basis and
5 it's something that, again, would be best evaluated in
6 the context of the whole forest management unit over a
7 rotation of the forest or more?

8 A. Yes, that's true.

9 Q. And in terms of defining clearcut
10 limits, and if the Board proposes to go that way in
11 terms of specifying a limit for a clearcut, would you
12 agree that if that was adopted, that the boundaries of
13 the clearcut should be defined upon forest structure
14 and not upon age or period since the last disturbance,
15 but upon the forest structure itself?

16 A. It also depends when you're looking
17 at the natural regeneration part when you would have a
18 seed crop available from that stand that would help in
19 regenerating the adjacent cut area.

20 Q. And that would be highly correlated
21 to the forest structure as opposed to the age of the
22 stand?

23 A. It could be, although quite often
24 it's put in terms of age of the tree, but the tree has
25 to be a certain age before it will start producing

1 cones.

2 Q. But some trees -- but the age at
3 which they'll produce cones is a function also of site
4 type; if you're on a very poor site, you may have a
5 very old tree but it still isn't producing cones?

6 A. And still...?

7 Q. Not producing cones. The extreme
8 case being a snag?

9 A. Well, I was thinking of jack pine on
10 a poor site, and quite often there's no problem with
11 them producing cones.

12 Q. I was thinking of black spruce, so
13 there's our problem.

14 A. And actually if you put a tree under
15 stress it will sometimes produce more cones than if
16 it's growing on a better site. So it's not quite a
17 direct relationship.

18 Q. All right. Well then, in terms of
19 from a silvicultural point of view, you're saying that
20 the definition in terms of when a clearcut is no longer
21 a clearcut should be based upon the reproductive status
22 of the trees in addition to their structure?

23 A. Correct, although the two may be
24 inter-related.

25 Q. On page 48898, again of Volume 271,

1 you are referring about the audit that, I guess of a
2 sort, that you undertook through your investigation of
3 various forest management units in the province, and at
4 line 16 you indicate --

5 MADAM CHAIR: What page number is that,
6 Mr. Hanna?

7 MR. HANNA: 48898.

8 MADAM CHAIR: Thank you.

9 Q. At line 16 you indicate:

10 "So they are following more of a
11 checklist. I guess what I am suggesting
12 is more just whether that checklist is
13 adequate for managing the area."

14 Now, I was interested in knowing the
15 answer to that question.

16 A. Well, if you're looking at managing
17 all resources in the area you cannot say that the
18 checklist is adequate at the present time, and
19 certainly when I looked at management plans I was also
20 saying that they weren't adequate from the timber point
21 of view in many cases.

22 Q. If there were clear quantitative
23 objectives of the sort that we've described in the OFAH
24 terms and conditions in terms of quality, quantity and
25 spacial distribution for timber and non-timber values,

1 would you see those as being as -- those objectives as
2 being a reasonable point of reference to measure the
3 adequacy of management of a forest management unit as
4 opposed to the checklist type of exercise that you've
5 described here?

6 A. If you're setting objectives for
7 managing a unit that people are agreeable with that are
8 looking after all the resources and they're measurable,
9 well then, certainly your degree of success would be:
10 How successful have you been in achieving those levels
11 that you aimed for.

12 Q. So that would be a reasonable basis
13 then to undertake the type of audit, if the audit you
14 had undertook in preparation to come here, those types
15 of objectives had been available to you, that would
16 have assisted you in the work that you undertook;
17 correct?

18 A. Yes, that would have helped,
19 presuming that all the features were considered --

20 Q. Captured?

21 A. Yeah.

22 Q. And so that from an auditing point of
23 view those objectives can serve as a primary basis for
24 undertaking future audits if they are incorporated in
25 timber management plans; is that a fair statement?

1 A. Could you repeat the first part of
2 your sentence, please?

3 Q. Sure. If those types of objectives
4 that cover the full range of forest benefits are
5 included in timber management plans in the future, they
6 would serve as a reasonable basis for future audits of
7 timber management -- of forest management units in
8 terms of achieving the desired level of management?

9 A. Yes, yes.

10 Q. And you're in agreement with that
11 approach?

12 A. Yes.

13 Q. On page 48929 of Volume 271 Mr.
14 Martel asked you a question and it related to your
15 descriptions about the clearcutting that was taking
16 place. I believe you were talking about intermittent
17 streams and the need to protect more than just lakes, I
18 believe was the essence of your point.

19 A. Yes.

20 Q. And he says:

21 "It seems to me...", I'm reading from
22 line 16,

23 "It seems to me like that's the direction
24 you're heading, and if you're suggesting
25 that you are losing water and that being

1 a term and condition for a buffer around
2 streams."

3 To the best of your knowledge is such a
4 term and condition currently in Forests for Tomorrow's
5 terms and conditions?

6 A. The first part again, please?

7 Q. Is there a term and condition that
8 responds to the concern that you identified in the
9 slides in FFT's terms and conditions at the present
10 time, to the best of your knowledge?

11 A. Specifically to that particular
12 item--

13 Q. Yes.

14 A. --it's not stated that way, but I
15 think it relates back to the way -- the preference for
16 smaller clearcuts to address that and a number of other
17 environmental features. So that's basically where it
18 would be covered.

19 Q. I'm not sure I understand that. Are
20 you suggesting if we had an intermittent stream that
21 flowed through the centre of a hundred acre jack pine
22 clearcut block that that would be adequate protection?

23 A. I'm suggesting that that would be
24 better protection than if it was, say, a thousand
25 hectares.

1 Q. I understand that. But my question
2 is, is that adequate protection? I just want to
3 understand what your position upon it is; is that
4 adequate protection?

5 A. I don't know if that would be
6 adequate or not.

7 Q. Is there any other measures included
8 to deal specifically with that concern that you can
9 draw my attention to in the FFT terms and conditions?

10 A. Other than the smaller clearcut size,
11 there were no other terms there, at least that I had a
12 hand in, that were dealing with that particular issue.

13 Q. If we could look at your witness
14 statement for a moment, Mr. Benson. On page 144 which
15 is part of section Chapter 7, I believe, I believe this
16 is under the heading Site Damage -- yes, Section 7,
17 Site Damage, and you have a quote there taken from
18 Bormann and Lichens, and point 2 indicates:

19 "Cutting should be done in the context of
20 a larger watershed unit and in relation
21 to all the previous cuts in the unit."
22 Do you see that?

23 A. Yes, I do.

24 Q. Do you endorse that position?

25 MADAM CHAIR: What page are we on, Mr.

1 Hanna?

2 MR. HANNA: I'm sorry, it's page 144 of
3 1604A.

4 MS. SWENARCHUK: Volume I.

5 MR. MARTEL: What section? You said 7,
6 did you?

7 MR. HANNA: It's a subsection of Chapter
8 7. The title of the subsection is Site Damage and that
9 title is on page 137. I was just trying to put in
10 context what the quote related to.

11 THE WITNESS: Do I agree with that?

12 MR. HANNA: Q. Yes.

13 A. Yes.

14 Q. Okay. I would like you to look at
15 OFAH terms and conditions 177 to 179 on page 30,
16 please. Just indicate to me when you've read them.

17 MS. SWENARCHUK: 177?

18 MR. HANNA: 177 to 179.

19 THE WITNESS: Okay.

20 MR. HANNA: Q. Are you in agreement with
21 the proposal there as a means -- as an effective means
22 to deal with the watershed level type of effects that
23 you've drawn attention to in your witness statement?

24 A. They're a means of quantifying it,
25 yes.

1 Q. That's a yes, you are in agreement
2 with the thrust of what's proposed here?

3 A. I think it's -- what you're doing is
4 quantifying it.

5 Q. Yes.

6 A. And, again, if I relate it back to
7 the proposal we had for Forests for Tomorrow where
8 to -- how do you tackle a situation now when you can't
9 quantify it. Well, you have to work with the
10 information available, and one way to try to address
11 that situation is with the smaller cut sizes that will
12 help.

13 Q. What can't we quantify, Mr. Benson?

14 A. Well, for example, in your point 179
15 subsection (i) subsection (a) it says:

16 "Detailed documentation of the procedures
17 developed to assess the magnitude of
18 cumulative watershed effects and the
19 acceptability of any predicted impacts."

20 Well, I don't think we could really do
21 that now for most management units.

22 Q. We couldn't provide detailed
23 documentation of procedures developed in six years from
24 now?

25 A. I'm talking about now. Six years

1 from now --

2 Q. But just a second, Mr. Benson. 179

3 says:

4 "The OMNR shall submit for review and
5 approval during the six-year review of
6 this Class EA."

7 That's six years from today or from - I
8 wish it was today - but from when the Board issues its
9 decision.

10 A. For the area of the undertaking and
11 all management units, yeah, I suppose it's possible to
12 do that.

13 Q. This is simply a procedure, I just
14 want to make sure we understand before you give your
15 answer. We are simply talking about documentation of a
16 procedure, if you will, develop a manual of how to
17 assess the magnitude and how to determine the
18 acceptability.

19 A. I can agree in general with what it's
20 trying to do, I just had a little problem in trying to
21 appreciate how practically can it be achieved. And
22 certainly the intent is good to try to quantify the
23 importance of the harvesting on a watershed. By
24 importance I mean, what is the effect of the harvesting
25 on the watershed.

1 Q. Are you suggesting that it's
2 impractical within six years or perhaps three years to
3 as the Ministry to develop a procedure, a manual of how
4 we will do -- how we will predict watershed level
5 effects in the future. That's basically 10 years. Is
6 that unreasonable?

7 A. When you asked that I was thinking of
8 everything else that they're being asked to do from all
9 the other terms and conditions and it boggles the mind
10 when you put it all together and I was looking at it in
11 that context.

12 I think it's possible to put together a
13 manual. Just how quantitative that manual would be, I
14 would think it would rely on a fair bit of research to
15 put quantitative values into that manual.

16 Q. Mr. Benson, you've indicated that you
17 are familiar with the U.S. Forest planning service
18 approach to timber management; correct, or forest
19 management?

20 A. Correct.

21 Q. Are you familiar with the way that
22 they deal with hydrological impacts and watershed level
23 effects?

24 A. It varies somewhat, but I have a
25 familiarity with them, not a complete --

1 Q. You're familiar or you have knowledge
2 of the WRENNS model that they use?

3 A. That's right.

4 Q. Is that technology not transferable
5 to -- is it not used in fact across the U.S.?

6 A. The general principles are
7 transferable, yes. The problem would be to get the
8 numbers that relate to our particular condition. And
9 I'm not really arguing or saying that we can't do it,
10 I'm saying it does take some effort to get reliable
11 data.

12 Q. I understand. Moving back to the
13 question of reliability though and what do we do in the
14 interim. Your problem is - or if I understand it - is
15 that you're saying that it is impractical to expect?

16 A. Well, I just was envisioning all the
17 different items that are being asked for and it struck
18 me as being improbable, that you could achieve all
19 those things at that time and -- but I would agree it
20 should be possible to put together a manual that would
21 indicate for Ontario the importance of harvesting on a
22 watershed, in fact I wouldn't mind if that was done
23 even sooner.

24 Q. I would like now to look at page
25 48957, please. And this again was during your

1 evidence-in-chief and you were discussing --

2 MADAM CHAIR: What page is that, Mr.

3 Hanna?

4 MR. HANNA: 48957, Madam chair.

5 MADAM CHAIR: That is 271?

6 MR. HANNA: Yes, Madam Chair.

7 Q. You were discussing with Madam Chair
8 and Mr. Martel the difficulty you had in pulling
9 together the information that you required in terms of
10 the past silvicultural and harvesting practices that
11 had taken place in the various management units. Do
12 you recall that discussion?

13 A. Correct.

14 Q. And Mr. Martel noted the difficulty
15 in putting all the information together, and asked if
16 you do not feel that that information should be
17 available and how we might deal with it.

18 And I don't think that it actually -- you
19 responded to that comment and I want to get your
20 response now. And I'm going to put a specific proposal
21 to you and I want to make sure it's consistent with
22 your experience.

23 If the cut maps and various other
24 silvicultural information were maintained on a
25 geographic information system for each forest

1 management unit on a historical basis, would this have
2 simplified your task?

3 A. Only if they were available.

4 Q. I'm sorry, if they were publicly
5 available, that information was publicly available?

6 A. If it was publicly available, yes.

7 Q. Would it have greatly simplified your
8 task?

9 A. Depends upon how it was put together.
10 If it included a data summary and you didn't have to
11 measure the areas individually, et cetera, yes, it
12 could have made it easier.

13 Q. And that's what one of the advantages
14 of a geographic information system is, measurements and
15 cut, obtaining quantitative information becomes
16 relatively simple?

17 A. It becomes easier to do, yes.

18 Q. Are you in support of the
19 implementation of geographic information systems across
20 the province for timber management planning as soon as
21 possible?

22 A. It's a modern tool that would be of
23 advantage to forest managers and it should be
24 implemented. I hesitate just for a second there
25 because some of the new tools, you have to be somewhat

1 careful in when you implement them, when do you get on
2 the band wagon; if you get on too early you end up with
3 technology that's out of date fairly rapid, but I think
4 at this time they should be moving in that direction
5 and I understand that they are moving in that direction
6 in many districts.

7 Q. And you would encourage that movement
8 to proceed as quickly as possible?

9 A. Sure. I think the point you were
10 making there though, I believe later on we did cover
11 that particular question of -- and added it to or were
12 talking about adding it to the Forests for Tomorrow's
13 terms and conditions whereby the reporting procedures
14 should include maps of the silvicultural harvesting
15 operations to show size and diversity produced on a
16 management unit.

17 Q. Yes, I did notice that in the
18 transcripts. The point -- there is several points that
19 I would ask you about that. As I understand it, the
20 modification you're considering was adding cut maps as
21 a requirement for a timber management plan; correct,
22 some historical maps?

23 A. Yes, more of a pattern type of map
24 and it relates back to what we were talking about
25 before, you would want something -- if you have a

1 target of what you're trying to produce, well, how are
2 you producing that, are you actually producing that,
3 something that you could see for the management unit
4 that shows what pattern are you producing on that
5 management unit by your harvesting operations.

6 Q. Would you agree for the public to
7 make an informed choice they would have to look at the
8 pattern not only historically but at least over a
9 rotation of the forest and that that is a pretty
10 difficult summary of information for the average
11 citizen to consume? It would have to be done very
12 carefully.

13 A. Well, there's two parts I think to
14 what you're saying there. First, you want to see,
15 well, what have you achieved with the past pattern,
16 what do you plan to achieve.

17 Again, I can't judge for the average
18 person, it depends upon how you present the data and
19 what people perceive from it.

20 Q. Now, when you were completing your
21 evidence-in-chief on Tuesday you had in your slide
22 presentation made reference to a number of instances
23 where you felt there had been inappropriate
24 silvicultural practices taking place and, for example,
25 two heavy a scarification on thin soils and bedrock

1 being exposed, scarification vertically up the slope
2 rather than across the slope, and examples like that;
3 correct?

4 A. Correct.

5 Q. And you also made reference to page
6 173 of your witness statement which I think is Volume
7 II, Section L.

8 MADAM CHAIR: Is that 170, Mr. Hanna?

9 MR. HANNA: 173, Madam Chair.

10 Q. And it indicates:

11 "In this case the personnel doing the
12 scarification did not have maps of the
13 area to be scarified."

14 And you indicate that is a limitation;
15 correct? 173, section L.

16 A. Right.

17 Q. Now, I would like you to turn to OFAH
18 term and condition 132 to 138, and this deals with the
19 training of woodland workers and I want to see -- I
20 want to get your view as to whether you feel that this
21 would be - it's on page 22 - a reasonable means to
22 operationally address some of the concerns that you
23 identified through your review of the various timber
24 management plans in the province or timber management
25 activities throughout the province.

1 MR. CASSIDY: Sorry, which term and
2 condition is that, Mr. Hanna?

3 MR. HANNA: It's term and condition 132
4 to 138 under the heading Woodland Workers Training.

5 MR. CASSIDY: Right, thank you.

6 THE WITNESS: To 138?

7 MR. HANNA: Q. Please. Do you see this
8 as a reasonable way to address some of the types of
9 concerns that you have raised in terms of inappropriate
10 silvicultural activities within the area of the
11 undertaking, training the woodland workers to reduce
12 the likelihood of those types of activities, not
13 solely, but as one measure to deal with that issue?

14 A. Well, certainly the more information
15 more people have about how we can manage the forest is
16 worthwhile and it should help in that respect.

17 Q. One last topic here and we're done,
18 Mr. Benson. I'd like to look at the matter of site
19 damage that's been a major subject of discussion in
20 your evidence, and I would like you to look at term and
21 condition 199 to 201 which is on page 33 of the terms
22 and conditions.

23 If you would take a moment to examine
24 those and then I would like to ask you a question on
25 them. Can I ask you to also read 202, Mr. Benson, I'm

1 sorry.

2 A. Okay.

3 Q. Now, if we look at term and condition
4 200 -- excuse me, term and condition 199, you'll see
5 that this -- the terms and conditions 199 through to
6 202 are designed to be implemented at some time in the
7 future with the understanding that the information
8 necessary to implement it is not available at the
9 present time. I want you to -- you understand that?

10 A. Right.

11 Q. Now, with that understanding and
12 presuming we are able to obtain that information, can
13 you look at term and condition 200, and if there was,
14 similar to what we have in the timber management
15 planning manual in terms of free to grow standards,
16 free to grow standards - I don't even use the term free
17 to grow because of the connotation to it - but we had
18 growth standards established for different species on
19 different site types and that was used as the measure
20 of silvicultural performance, would that address many
21 of the concerns that you've identified in terms of site
22 damage and its impact on forest productivity?

23 A. I don't think it would address the
24 site damage directly from the terms of view of
25 predicting productivity, it would help that way. The

1 productivity, I assume you mean, how much volume is
2 that forest going to put on in the future.

3 Q. I don't understand the two balls that
4 are in the air here. There's productivity in terms of
5 wood productivity.

6 A. Yes.

7 Q. And then site damage is something
8 different from that. What are the two? You said this
9 captures one thing, it doesn't capture the other.

10 What's the other it doesn't capture?

11 A. The site damage part.

12 Q. And what do you mean by site damage
13 then, I don't follow that.

14 A. Well, that is what I didn't follow
15 from your question.

16 Q. Okay. All right. Well, let me start
17 again then. If we had set up these growth standards in
18 terms of growth rates for species by site type and that
19 was the measure that was used to determine
20 silvicultural performance, would that address the
21 concerns that you have raised in terms of site damage?

22 A. No, I don't think it would.

23 Q. All right. And why wouldn't it?

24 A. Well, I don't see that there would be
25 a direct relationship.

1 Q. Between...?

2 A. Between the two.

3 Q. I'm sorry, the two...?

4 A. Between the site damage and the
5 volume of timber being produced. Why I don't see that
6 direct relationship is, is because you would have to
7 have some good information of what was there before as
8 to whether you've increased or decreased the volume
9 production from that site.

10 If you've changed working group, it
11 throws in an added complication, you have to have some
12 idea, well, what would that site produce before with
13 the working group that wasn't there.

14 Q. But how is that problem -- is that
15 problem not there no matter what measure we use?
16 How's that problem unique to this proposal?

17 A. Yeah. Well, that problem is always
18 there, yes. I'm having trouble...

19 Q. How do you propose to address it?

20 A. To address the problem of...?

21 Q. What you've just described.

22 A. I think I'm missing something here
23 because I don't quite get the point that you're driving
24 at.

25 Q. Why is site damage bad?

1 A. Because the site damage can affect
2 the productivity of the various resources on the area.
3 Now, in order to understand that damage or how much
4 damage is there, you have to know, well, what was it
5 producing before.

6 If you have your method here it will show
7 you, well, what can you produce now with the site in
8 the condition that it is now. Maybe I'm trying to look
9 at it too detailed, but --

10 Q. Maybe let's try and keep it as simple
11 as possible then. Site types that we're talking about
12 here would be -- that we're proposing, that OFAH is
13 proposing is the FECs which are a site classification
14 procedure; correct?

15 A. Right.

16 Q. So that defines a site type?

17 A. Okay.

18 Q. Now, that site can be damaged by
19 silvicultural procedures; agreed?

20 A. It could be.

21 Q. But the standard that you would
22 establish for that site type you would hope based upon
23 what would be optimum silvicultural management of that
24 site; correct?

25 A. You would hope so, yes.

1 Q. So we would have a provincial
2 standard that says on FEC V36 with jack pine the annual
3 increment should be half a metre.

4 A. Yes. That's what you don't have at
5 the present time though.

6 Q. Remember, I set that out right at the
7 very beginning of this line of questioning, I agree
8 that we don't have the information at the present time,
9 so I accept that.

10 What we're proposing here is a way to go
11 into the future, and we're saying we want to collect
12 that information. You understand that?

13 Now, I'm asking you, if we have that
14 information, then what can we do with it and will it
15 address the concerns you've raised. So bear with me, I
16 agree with you we don't have the information at the
17 present time. Can you accept that?

18 A. I accept that.

19 Q. Okay. Now, let's accept that we have
20 collected the information at some point in the future.

21 A. Okay.

22 Q. We now have a provincial standard for
23 growth increment for jack pine on FEC V36 and that
24 increment may vary by the age of the tree, so that when
25 it's one year old the increment may be 10 centimetres

1 and when it's 15 years old it may be a metre and a
2 half, but they set a growth curve for that tree on that
3 site?

4 A. Okay.

5 Q. Now, if that becomes the basis for
6 measuring silvicultural performance, is that a way --
7 and that measure of silvicultural performance is -- the
8 forester managing that property is accountable to
9 achieve that level of performance, is that a way to
10 address your concerns in terms of site damage? If it
11 isn't, explain to me why?

12 A. It's one way to go about it. I just
13 have trouble with the amount of information that would
14 have to be put together and to come up with the
15 material you're talking about.

16 I would envisage it might be more
17 important to determine what the detrimental effects are
18 in different sites by some type of research project so
19 you at least establish some bounds as to what damage is
20 being caused.

21 For example, with the rutting and
22 compaction on different soils, whether it's caused by
23 harvesting or silviculture, what really is the impact
24 on particular sites at the present time. And I don't
25 think you have to go out and measure every site that's

1 been harvested to determine that, you have to have some
2 research established that determines the bounds with
3 which it occurs on the different sites, so that can
4 give you direction as to how those sites should be
5 managed, and it can tell you then -- give you an
6 indication, well, which sites are really being damaged
7 and it might narrow it down so that you pick out
8 certain FEC types where it's more important to get that
9 information to monitor, where other sites it may not be
10 as important.

11 Q. And how is that approach in any way
12 excluded by what is proposed here?

13 A. Well, it's not excluded but it's not
14 stated.

15 Q. How many research plots would you say
16 would be required for the area of the undertaking in
17 order to provide the level of understanding that you
18 think is necessary to implement that type of an
19 approach?

20 A. I wouldn't even hazard a guess at
21 this time and I couldn't give you an answer on that
22 just off the top of my head. And for a study of that
23 importance, I'd want to sit down with a statistician
24 and design an experiment to do that.

25 Q. Have you read a paper by Dean

1 Baskerville entitled Cumulative Environmental impacts,
2 which I believe is Exhibit 1284 of this hearing.

3 A. I can't recall if I read it or not.
4 I would have to glance at it to see if I read it.

5 Q. Are you familiar with the paradigm
6 set up about real problems and toy problems and real
7 research and toy research?

8 A. If it's in that paper, no, I'm not
9 familiar with that.

10 MR. HANNA: Thank you, Mr. Benson, those
11 are my questions.

12 Thank you, Madam Chair, for your time.

13 MADAM CHAIR: Mr. Cassidy, shall we
14 begin -- yes, let's begin now.

15 MR. CASSIDY: Madam Chair, it's going to
16 take me some time to get set up. I would anticipate it
17 would probably take me until a quarter to twelve to set
18 up. If you wish to take a short adjournment, or you
19 are welcome to watch me set up.

20 MADAM CHAIR: Are you telling us we have
21 to take a long lunch hour, Mr. Cassidy?

22 MR. CASSIDY: Well, I'm prepared to start
23 at a quarter to twelve.

24 MADAM CHAIR: No, let's start our lunch
25 break now, Mr. Benson.

1 THE WITNESS: Very good, thank you.

2 MADAM CHAIR: Ms. Swenarchuk?

3 MS. SWENARCHUK: And return at one then,
4 or 1:30, Madam Chair?

5 MADAM CHAIR: 1:30.

6 ---Luncheon recess taken at 11:35 p.m.

7 ---On resuming at 1:30 p.m.

8 MADAM CHAIR: Please be seated.

9 Mr. Cassidy?

10 MR. CASSIDY: Good afternoon, Madam
11 Chair, Mr. Martel.

12 CROSS-EXAMINATION BY MR. CASSIDY:

13 Q. I would like to commence by coming
14 back to something you told Mrs. Koven on Tuesday, Mr.
15 Benson, and that was that, if I understand the gist of
16 your evidence, you would support management efforts to
17 enhance diversity in areas that are of a natural
18 uniform age-class.

19 Can I assume then that it's your view
20 that management actions taken by man can and should
21 improve on nature, where possible?

22 A. I think there's a variety of ways to
23 answer that. It's sort of a general type of question.
24 Within a management unit you could perhaps improve on
25 the age-class distribution to enhance the wildlife that

1 is on that particular management unit. In some
2 particular cases if you have good sites you could
3 practise intensive silviculture and try to enhance the
4 area just for timber production.

5 Q. So that those two are essentially
6 examples of the proposition I put to you, that in
7 circumstances that you just described management
8 actions taken by man can or should improve on what
9 nature has left or what existed there in nature before.

10 Those are examples; is that correct?

11 A. Yes, yes.

12 MADAM CHAIR: Excuse me, Mr. Benson, but
13 isn't that an improvement with respect to what we've
14 decided we want. Whether it's an improvement on
15 nature, it's an improvement on nature from the eyes of
16 people with respect to what they want out of the
17 forest?

18 THE WITNESS: I'm not quite clear on what
19 you mean by that.

20 MADAM CHAIR: Well, Mr. Cassidy's
21 question -- we've heard much evidence at this hearing
22 on the comparison between natural disturbances in the
23 forest versus human disturbances and how similar they
24 are, and the question that has been put to you is not
25 exactly that issue, but the question is: Do we have

1 the capability to improve the forest. And I think you
2 said, yes, and I was saying, but isn't that improvement
3 designed to our wishes, not with respect to improving a
4 natural landscape, but to produce on that landscape
5 what we decide is important or valuable?

6 THE WITNESS: Yes, that's correct.

7 MR. CASSIDY: Q. And that is where you
8 would want a professional judgment to come to bear
9 using site-specific circumstances and the judgment
10 being made in light of those site-specific
11 circumstances; is that correct?

12 A. To determine the whole process for
13 managing an area you would have to determine what
14 levels of production are possible on that area. The
15 final decision as to what you're going to do on a
16 particular area might go through more than just
17 determining what can be the actual techniques involved.

18 Q. But if you decide, as Madam Chair has
19 just indicated, that this is one of your objectives and
20 you perceive that as an improvement of the forest, you
21 would then have professional judgment brought to bear
22 to achieve that objective of improvement?

23 A. Professional judgment and knowledge,
24 yes.

25 Q. Okay. Now, is it permissible in your

1 view, Mr. Benson, to convert natural stands then to --
2 after depletion of whatever form, harvesting, fire, et
3 cetera, to achieve wildlife habitat objectives or
4 targets. That's a permissible objective; is it not?

5 A. To reduce natural stands?

6 Q. No, to convert natural stands.

7 A. To convert them --

8 Q. From one species to another.

9 A. To a different species. I think that
10 can be permissible under certain circumstances, yes.

11 Q. Right. That's consistent with
12 changing a large uniform age-class area, introducing a
13 species that wasn't there of that age-class that is
14 different from that age-class; right?

15 A. Yeah. I took by your first part of
16 the question that you're talking about changing to
17 another species.

18 Q. Okay. That's what I'm talking about,
19 stand conversion. You have a large uniform age-class,
20 let's say jack pine, and as a form of wildlife habitat
21 objective that you're trying to reach you decide, using
22 professional judgment, to convert a portion of that to
23 black spruce for example. That's permissible; right?

24 A. It's possible that you might want to
25 do some action like that, yes.

1 Q. And it's permissible, in your view,
2 in certain circumstances?

3 A. If it fits in with the overall plan
4 that's going to be beneficial to the area, yes, I can
5 see that.

6 MR. MARTEL: How often in your experience
7 have you seen stand conversion for wildlife?

8 THE WITNESS: Specifically designed to
9 be --

10 MR. MARTEL: Yes.

11 THE WITNESS: In my own experience I know
12 of two cases when I was a management forester where we
13 did that on small areas. The majority of the cut was
14 not designed that way at that time.

15 I would think that there is probably more
16 of that work done that way now than what there was in
17 the past. But I couldn't put an exact percentage on
18 it.

19 MR. CASSIDY: Q. I want to talk about
20 the future, Mr. Benson, not the past and I want to ask
21 you if in fact that's permissible in the future, given
22 all the provisos you've just discussed, that form of
23 stand conversion for wildlife habitat objectives?

24 A. Is it permissible in the future?

25 Q. Yes. do you see it as being

1 permissible? Would you see that as permissible in the
2 future, would you like to see that as permissible?

3 A. I think it could be permissible in
4 the future, yes, and probably should be.

5 Q. Okay. In fact to be fair to you,
6 your terms and conditions talk about that, I believe,
7 in terms of permitting modifications to be done to what
8 are your silvicultural prescriptions to enhance
9 wildlife objectives.

10 A. I believe that's right. I don't know
11 the exact number.

12 Q. That's fine. Now, I want to ask you:
13 Is it permissible, Mr. Benson, for managers to convert
14 natural stands from one species to another to achieve a
15 timber management objective?

16 A. I think that again can be
17 permissible, again, in certain circumstances, yes.

18 Q. Okay. So let's make sure we're clear
19 about what I meant by timber management objectives and
20 make sure you and I are on the same wave length.

21 I mean by that the wood supply objective.
22 Is it permissible to convert natural stands to achieve
23 timber management objectives, and I would like you to
24 insert wood supply objectives. Is that permissible?

25 A. Permissible under certain

1 circumstances.

2 Q. Such as...?

3 A. Well, I think the two cases we looked
4 at so far for the wildlife and the timber, when you're
5 looking at a management unit you have to try to
6 consider both of those plus other uses at the same
7 time, so they have to modify each other.

8 Q. Correct. And so you're saying you
9 cannot simply focus on -- in terms of deciding whether
10 or not you're going to allow stand conversions in the
11 future in your planning regime, you cannot focus on
12 just allowing it for timber -- for wildlife habitat
13 objectives, you would agree with me that you have to
14 include timber management objectives as well in that
15 decision?

16 A. And vice versa.

17 Q. Right. And as a result it would be a
18 mistake for this Board then, in your view, to impose
19 terms and conditions which would allow for timber
20 management -- I'm sorry, for stand conversion to be
21 practised only with the objective of wildlife habitat
22 in mind; am I correct?

23 A. No, I think you missed the point
24 there. I think it's a mistake. You could say the same
25 thing for timber production with only timber production

1 in mind.

2 Q. Oh, absolutely. But I'm suggesting
3 to you, sir, it would be an equal mistake to impose a
4 term and condition which allows for stand conversion
5 only for the purpose of wildlife habitat objectives and
6 that the proper term and condition would require that
7 the stand conversion could occur for timber management
8 objectives as long as both things were included in the
9 consideration of that decision; is that correct?

10 A. With some exceptions. I would think
11 that when you're looking at some species, say
12 endangered or rare species, well then, that particular
13 habitat -- if you're modifying habitat for it, you
14 would want to do it that way.

15 Q. Well, as Madam Chair once said, I
16 believe those are the easy cases. I'm just talking
17 about the normal situation, I'm not going to argue with
18 you about rare and endangered. Aside from those, is my
19 proposition correct?

20 A. That you would not want to set aside
21 an area -- modify an area for wildlife management
22 solely on its own?

23 Q. No, that's not my proposition. The
24 proposition was that you would not want a term and
25 condition that allows stands to be converted for

1 wildlife habitat objectives but would not allow stands
2 to be converted for timber management objectives?

3 A. Oh, okay. I had your question all
4 wrong then. So you're saying don't exclude one reason
5 was -- I'm not too sure what you're saying, whether you
6 should have both or you want to exclude both.

7 Q. I'm saying it would be wrong to pass
8 a term and condition; would it not, that would have the
9 effect of not allowing natural stand conversions for
10 timber management purposes?

11 A. I think that should be in there, that
12 under certain circumstances it might be necessary,
13 yeah.

14 Q. Okay.

15 A. But not over the whole management
16 unit. See, I think --

17 Q. That would have to be a site-specific
18 determination; right?

19 A. As part of the decision process, yes.

20 Q. Now, I want to go to your terms and
21 conditions, and this follows up on a discussion that
22 you had with Mr. Hanna this morning and it occurs to
23 me -- do you have them in front of you, Mr. Benson?
24 When I say your, I mean Forests for Tomorrow.

25 MR. CASSIDY: Does the Board have those?

1 MADAM CHAIR: Yes, we do, Mr. Cassidy.

2 MR. CASSIDY: Q. If we turn to page 15
3 of your terms and conditions and if we turn our eyes to
4 what I think is Section 15(i), you see that at the
5 bottom of the page there?

6 A. Yes, I do.

7 Q. Would you agree with me that that is
8 the section that contains very specific numbers in
9 terms of clearcut size for various species? If you
10 want to take your time to look through that, go ahead.

11 A. Specific for most of them except for
12 the 15, subsection -- I'm sorry, 15 section (i),
13 subsection (b), the mixed wood management, white
14 spruce, where it's not really clear as to the size.

15 For the subsection (d) for white pine
16 uniform shelterwood method, it doesn't really specify
17 the area to be covered for that, similarly for
18 subsection (e) for red pine and also for subsection (h)
19 where it doesn't really discuss -- specify any area
20 limitation on that method.

21 Q. But with respect to all the others
22 there appear to be numbers or numerical quantifications
23 of what one might call clearcut restrictions and
24 clearcut size maximum; am I correct?

25 A. That's right.

1 Q. And there are also ones that state
2 that you shall harvest in a certain fashion; for
3 example, if you look at 15, subsection (i) right in the
4 middle of page 16 with respect to black spruce types
5 below 10 hectares, it specifies that the two-coupe
6 alternate strip cutting system shall be conducted?

7 A. Correct.

8 Q. Okay. Now, do you see at the very
9 beginning of Section 15(i) it states that:

10 "In addition to the requirements of
11 condition 14(i)..."

12 MR. CASSIDY: I'm looking at the bottom
13 of page 15, Mr. Martel.

14 Q. "...all prescriptions must comply
15 with the following working group
16 standards."

17 Do you see that word must?

18 A. Yes.

19 Q. Okay. And do you see that in respect
20 of the portion I just read to you about black spruce
21 types below 10 hectares, on the middle of page 16, it
22 states:

23 "The two-coupe alternate strip cutting
24 shall be conducted."

25 Do you see that?

1 A. Yeah, I see that.

2 Q. And do you see that with respect to
3 the jack pine at the bottom, paragraph (c), it refers
4 to clearcuts, and I'm just going to paraphrase,
5 cut-overs shall not exceed 100 hectares in area. Do
6 you see that?

7 A. I see that.

8 Q. Now, you discussed with Mr. Hanna
9 this morning, and I think in fact it's not the first
10 time you mentioned it, that you were in general
11 agreement with Forests for Tomorrow's terms and
12 conditions, but you also indicated that you, however,
13 did not want to tie the forester's hands or tie the
14 forester up.

15 And I would like you to indicate to me
16 where, sir, the flexibility is involved in these
17 standards in Section 15(i) when the words must and
18 shall are used, such that the forester's hands would
19 not be tied?

20 A. The way they're stated here, no, they
21 don't have that flexibility in them and that's why I
22 say I'm in general agreement with them from the point
23 of view that they would limit the size of the cut-over
24 areas.

25 As to whether they would actually

1 specifically work on a given area, I think that's where
2 you need to apply the knowledge of the forester that
3 has experience of that area or develops the experience
4 for that area.

5 Q. Well, are you suggesting that if a
6 forester has experience in that area or develops
7 experience in that area which suggests that those terms
8 and conditions are inappropriate that he can ignore
9 them?

10 A. I'm suggesting that if he has better
11 methods for obtaining natural regeneration that he use
12 those methods.

13 Q. Or better methods for obtaining
14 regeneration in any form; correct?

15 A. No, I would say better methods for
16 obtaining natural regeneration.

17 Q. So you are not seeing any
18 flexibility; are you, with respect to a forester
19 applying methods other than natural regeneration that
20 might be inconsistent with these terms and conditions?

21 A. I'm sorry, I missed the gist of that.

22 Q. Is the forester allowed to deal with
23 these types -- these working groups or site types in
24 any fashion other than natural regeneration?

25 A. It's under one of the other terms

1 where they are allowed to do intensive management if
2 the present net worth analysis of the situation proves
3 that it can be worthwhile.

4 Q. Can you point that out to me.
5 Maybe I can help. Is that 19(ii)?

6 A. No.

7 MS. SWENARCHUK: I think we're looking
8 for 14(i).

9 MR. CASSIDY: Well, I'm interested in
10 what the witness thinks, not Ms. Swenarchuk.

11 MS. SWENARCHUK: I don't think it should
12 be a competition here to find words in a 50-page text.
13 If you could focus on the issue.

14 MR. CASSIDY: I am focussing on the
15 issue, Madam Chair. I'm not interested in Ms.
16 Swenarchuk's evidence.

17 MADAM CHAIR: Mr. Cassidy, I think the
18 Board accepts that we haven't all memorized every word
19 in every document.

20 MR. CASSIDY: I appreciate that, but --

21 MS. SWENARCHUK: I have also specifically
22 asked that this witness not be required to read large
23 amounts of material, as he was this morning. I hope we
24 can avoid that.

25 MR. CASSIDY: Well, Madam Chair, may I

1 just state that this is not a document I gave him, I
2 didn't ask him to read anything. If Mr. Benson has a
3 problem with the amount of material I gave him I would
4 be surprised because it amounted to about that much
5 (indicating) and, in addition, it's his terms and
6 conditions which he indicated he wrote, Madam Chair,
7 and I'm just asking him -- he's indicated there's a
8 term and condition in there he knows about, and I would
9 just like him to give the answer to me, that's all.
10 I'm not trying to be difficult.

11 MR. MARTEL: What if the answer's there
12 and he doesn't know the exact location?

13 MR. CASSIDY: Well, he can give me the
14 answer on Monday if he says he wants the weekend to
15 look over it.

16 Q. Go ahead.

17 A. I don't quite understand. Is it a
18 game of whether I can find it or not?

19 MADAM CHAIR: I think that was the
20 implication, Mr. Benson, but we will certainly provide
21 lots of time and assistance to find correct reference
22 numbers.

23 MR. CASSIDY: Do you need more time, sir,
24 to find that?

25 MR. MARTEL: We can even have a break, if

1 you want.

2 MR. CASSIDY: Well, I think we have
3 enough we can cover and come back to it, Mr. Martel.

4 THE WITNESS: I would like to find it as
5 fast as I could, but I think to speed things along I
6 will give it to you Monday then, if you like.

7 MR. CASSIDY: That's fine, thank you.

8 THE WITNESS: And I would suggest -- so
9 any other things you ask me to look up and I can't
10 remember the location, it will take me time to find it.

11 MR. CASSIDY: That's fine. That's fine.
12 That's all you need to indicate, sir, and we'll deal
13 with it.

14 THE WITNESS: But I don't understand why,
15 because what difference does it make if somebody else
16 tells me where to find it right away.

17 MADAM CHAIR: Mr. Benson, be assured that
18 the Board is not impressed by a witness' ability to
19 locate a specific line in a text.

20 THE WITNESS: Thank you, Madam Chair.

21 MR. CASSIDY: I would only indicate I'm
22 not interested in the testament he knows what the
23 document is, Madam Chair, but I will move on and you
24 can come back to that and give it to me Monday, sir.

25 Q.- Where is the flexibility, Mr. Benson,

1 for a forester to exceed 100 hectares in clearcut size
2 in jack pine?

3 A. In one cut, there is none.

4 Q. So you have tied the forester's hands
5 then; have you not?

6 A. That's right.

7 Q. And, therefore, you are prepared to
8 tie the forester's hands in certain circumstances; is
9 that correct?

10 A. They are tied to a certain extent.
11 That doesn't mean to say that it couldn't be 99 or 75
12 or 50 hectares.

13 Q. Or one?

14 A. Or one, yes.

15 Q. But it could not be 101; could it?

16 A. Right.

17 Q. Now, if a forester determines that
18 the appropriate size of harvesting that area is 115
19 hectares or 130 hectares or 150 hectares and he
20 determines that after an analysis of net present worth,
21 after an analysis of all the factors that you say he
22 should, your evidence is that he could not exceed 100
23 hectares; is that correct?

24 A. That's correct. There is possibly an
25 exception under 19(ii) where it concerns the large

1 areas.

2 Q. Okay. Well, if I look at 19(ii) it's
3 the senior biologist who has the final decision, not
4 the forester; is that correct?

5 A. For that particular part, yes.

6 Q. Well, that's the part you just
7 referred to, sir. That doesn't deal with a forester
8 exceeding clearcuts, that deals with a biologist
9 exceeding clearcuts.

10 Where is the discretion for a forester
11 who is faced with that decision and that dilemma to
12 exceed the clearcut limit of 100 hectares?

13 A. Well, I would hope that the forester
14 would listen to the biologist and that they would work
15 together on the operation.

16 Q. And the biologist is taking into
17 account wildlife factors; correct, when making that
18 decision?

19 A. Right.

20 Q. That is in your 19 sub (ii); correct?

21 A. Correct.

22 Q. Now, the net present value and the
23 net present worth has to take into account more than
24 just wildlife factors; correct?

25 A. Correct.

1 Q. It has to take into account all
2 resources?

3 A. Right.

4 Q. All users; correct?

5 A. Right.

6 Q. So that the senior biologist,
7 according to your term and condition, is only required
8 to consider one of those but that is not a full
9 analysis of the net present worth; correct?

10 A. No, if you limit it to making the
11 decision at that particular point.

12 Q. Well, that's the only exception that
13 exists, sir, by your terms and conditions?

14 A. Right.

15 Q. Well, then it's limited. Only the
16 biologist can make an exception to that rule and it's
17 only for wildlife habitat purposes; correct?

18 A. The way that's interpreted, yes, that
19 would be your --

20 Q. So I suggest to you, sir, it has
21 absolutely -- that exception has absolutely nothing to
22 do with net present worth exceptions, that in fact it
23 has nothing to do with the forester making an exception
24 and, therefore, you have tied the hands of the
25 forester, he could not exceed 100 hectares

1 notwithstanding that the net present worth analysis
2 that you have suggested indicates that it would be
3 wrong to do so; correct?

4 A. That's possible that his hands would
5 be tied in some circumstances to that extent.

6 Q. And is that why you are not in
7 agreement with Forests for Tomorrow's terms and
8 conditions in that context?

9 A. I didn't say I wasn't in agreement
10 with them, I said I was in general agreement with them.

11 Q. Well, do you not believe then that it
12 would be better to have a term in there dealing with
13 the forester's ability to have an exception to the
14 shalls and musts contained in Section 15 in order to
15 deal with the very situation I just described?

16 A. No. I think the point - I described
17 this before, what my general agreement was - the main
18 import of these silvicultural guidelines, from my point
19 of view, was to put restrictions on the size of
20 clearcut areas.

21 Q. I know that was the intention sir.
22 I'm talking to you about -- were you finished?

23 A. (nodding affirmatively)

24 Q. Okay. I'm talking to you about what
25 the effect of this is, and I'm talking to you about

1 your own analysis of net present worth, and I'm
2 suggesting to you, sir, that your own analysis will put
3 a forester in a situation where he will not be able to
4 achieve the net present worth in situations where he
5 believes that the clearcut size has to be exceeded
6 because you have tied his hands.

7 And do you agree or disagree with that?

8 A. It's possible that that can happen.

9 Q. If it's possible that that could
10 happen, do you believe, sir, that your terms and
11 conditions should now be amended to provide an
12 exception that allows for that clearcut to be exceeded,
13 those clearcut restrictions to be exceeded in light of
14 that scenario?

15 A. I would have to see that scenario
16 more in detail before I could agree to that.

17 Q. All right.

18 A. Because I'm saying the scenario is
19 possible, I don't know for sure if it's --

20 Q. I suppose you don't think it's
21 likely; do you?

22 A. Well, I don't know how likely it
23 would be.

24 Q. I see. Now, there are situations;
25 are there not, where timber management objectives would

1 suggest that there should be clearcuts exceeding 100
2 hectares for operational reasons, for cost reasons;
3 would you accept that?

4 A. That timber management -- the first
5 part of your sentence?

6 Q. Timber management objectives would
7 suggest that -- can you envisage a situation where
8 timber management objectives would require that the
9 clearcut should exceed 100 hectares for cost reasons,
10 et cetera, just timber management objectives at this
11 point? Do you agree that that situation could occur?

12 A. For cost reasons only.

13 Q. All right.

14 A. I don't think so, no.

15 Q. Well, do those situations occur or do
16 they not occur?

17 A. I'm saying it's possible they could
18 occur, but I don't think they do occur.

19 Q. So you're saying that in
20 circumstances where an operating company is in a unit
21 where it is uneconomic to harvest the area on the basis
22 of less than 100 hectares, you're saying that situation
23 never occurs?

24 A. You're talking about it's
25 uneconomical to the company?

1 Q. Yes, its cost. At this point just to
2 the costs to the company?

3 A. Okay. Well, when we're considering
4 present net worth in this analysis here I was
5 considering it from the point of view of the manager of
6 the land, the government.

7 Q. I haven't got to that part yet; we'll
8 will get to that. I'm just starting at the first level
9 with this strict timber management objective of
10 harvesting the wood and processing it later on down the
11 road, the wood supply objective, would make it
12 uneconomical to harvest at less than a hundred
13 hectares.

14 Do you agree that that situation could
15 occur?

16 A. Okay. Well, did all your other
17 questions before refer to the economics from the point
18 of view of the company?

19 Q. No.

20 A. But now they are?

21 Q. This question is. Do you agree that
22 that situation could occur?

23 A. For a hundred hectares? I think the
24 controlling factor there would be how much road he had
25 to build to get to that particular area, so it could

1 occur under that circumstance.

2 Q. Okay. And as a result, when you
3 throw that into the hopper of your net present worth
4 and there are situations which make that net present
5 worth, with all the other factors that you want to put
6 in, still in a situation -- still generate a situation
7 where the clearcut has to exceed 100 hectares in order
8 for there to be a profit - which is what your objective
9 is - now, do you see that there could be a situation
10 arising where there has to be an exception to that
11 clearcut rule to make the net present worth profitable?

12 A. The net present worth to who, the
13 company or to the government?

14 Q. No, at this point to the whole unit.

15 A. We're switching back and forth here
16 with net present worth values that it tends to cloud
17 the issue I think. I can't really get the kgist of
18 your question in the sense -- in the way that you're
19 putting it.

20 Q. Mr. Benson, the net present worth
21 analysis that you have contemplated and in your view
22 should be used could potentially produce a situation;
23 could it not, where the only way the profit can be
24 shown is if the clearcut exceeds 100 hectares.

25 Would you agree that that is a potential

1 situation in jack pine, for example?

2 A. I'm sorry. Now, say that again,
3 please?

4 Q. Well, you've got a hundred hectare
5 clearcut restriction, a forester cannot allow
6 harvesting to go beyond 100 hectares according to your
7 regime; correct, in jack pine?

8 A. Correct.

9 Q. He does, however, his net present
10 worth analysis which indicates, after taking in all the
11 factors that you take, that the only way he can produce
12 a profit is to allow a profit to the whole management
13 unit, to society is to allow the clearcut to exceed 100
14 hectares for cost reasons to the company plus other
15 things, every other factor, is there -- or I'm sorry,
16 should there be an exception in your terms and
17 conditions to allow for that situation?

18 A. If we're looking at net present worth
19 from a point of view of the Crown and doing the
20 analysis from their point of view--

21 Q. Yes.

22 A. --and looking at all the particular
23 values there, again, if they're building the road, then
24 that would be a high cost if you're building a new road
25 into an area and that might sway the argument in a

1 particular case as to what size of cut would justify
2 building that road too.

3 But I don't think -- if we're just
4 looking at one spot and we're not considering the
5 future access and so on, it is possible in some cases
6 that that could be a situation, but I think that would
7 be the extraordinary case, not the regular type of
8 case.

9 Q. All right. And you're willing to
10 sacrifice the profit in that extraordinary case; are
11 you?

12 A. Again, you would have to take a look
13 at it in the long term and see if you're sacrificing
14 that profit in the long term or whether it's just --
15 for example, if it was a road problem, well, perhaps
16 you're building that road over a period of years and 10
17 years down the road it --

18 Q. So if it's short term profits --

19 MS. SWENARCHUK: Excuse me. He's
20 entitled to complete his answer before the next
21 question.

22 MR. CASSIDY: Sorry.

23 Q. Are you finished?

24 A. Yes. So 10 years down the road it
25 may be profitable then to work on that particular area.

1 Q. All right. So you're willing to
2 sacrifice the short-term net present worth profit if it
3 looks all right in the future?

4 A. Again, presumably you have other
5 alternatives too and, in that case, I would, yes.

6 Q. All right.

7 The jack pine clearcut restriction of 100
8 hectares, Mr. Benson, that would apply over any site
9 type, any stand condition whatsoever; is that correct?

10 A. For a jack pine working group,
11 correct.

12 Q. It doesn't matter about the stand
13 conditions in that particular area?

14 A. You mean the age of the stand, the
15 stocking of the stand?

16 Q. Yes.

17 A. Not the way they are laid down, no.

18 Q. Not the way they're written here in
19 these prescriptions?

20 A. Correct.

21 Q. And you agree with that?

22 A. Again, I stressed in the general -- I
23 have general agreement with them from the point of view
24 that they will limit the size of clearcuts and allow
25 for more natural regeneration and be more beneficial to

1 the other aspects of the environment.

2 Q. Well, what do you disagree with about
3 that particular term and condition then?

4 A. With that particular one?

5 MR. CASSIDY: Madam Chair, just to assist
6 you, we are looking at the one under -- at page 16
7 under (c).

8 THE WITNESS: With that particular one
9 and with the other ones, as I said before, I believe if
10 you want to get the best natural regeneration of an
11 area you have to rely upon the people that work in that
12 area and that have the experience there to refine them
13 based on what they can document and what they know
14 about that area.

15 MR. CASSIDY: Q. But if their experience
16 tells them that they can go beyond 100 hectares, are
17 you telling me that they can't use the benefit of that
18 experience?

19 A. At this time I would say yes,
20 because --

21 Q. Yes, that's the impact?

22 MS. SWENARCHUK: Mr. Cassidy.

23 MR. CASSIDY: I apologize, Ms.

24 Swenarchuk.

25 Q. Go ahead.

1 A. At this time I would say yes, because
2 from what I have seen we have lots of areas that have
3 been cut above 100 hectares, and I think there's
4 questions as to, well, what effect do these large
5 cut-over areas have on the environment, are they that
6 detrimental or not?

7 Let's determine what the exact effect is
8 and if you can cut an area larger than 100 hectares and
9 it's not detrimental, then I would say: Okay, fine, go
10 ahead and do it. But right now it's a real question
11 mark, and I would suspect that 100 hectares, above that
12 there is some more detrimental effects.

13 Q. But where does it say that you can go
14 ahead and do it, sir, in this term and condition? The
15 word, as I indicated to you, is shall not exceed 100
16 hectares.

17 A. Right. In this term and condition
18 it's says no, you shall not do that.

19 Q. All right. So then you cannot use
20 the benefit of that local judgment and experience in
21 the situation you just described with these rules in
22 place; correct?

23 A. That would be correct.

24 Q. Well, is that particularly healthy
25 for the forests of Ontario, to have a forester who

1 knows that he can regenerate at a higher level of
2 clearcuts than is prescribed here and yet he has to
3 sacrifice it because of some hard fast rule that is
4 applied across the province without any consideration
5 of site and stand conditions? That's called top/down
6 management; is it not, sir?

7 A. I don't know what type of management
8 you would call it.

9 Q. I'm asking you. You don't know?

10 A. Correct. I wouldn't call that
11 top/down management.

12 Q. What would you call it?

13 A. Well, if this term and condition was
14 written down -- I'm not exactly how this process is
15 going to work, but certainly the term and condition
16 would come from Forests for Tomorrow, which is really
17 not the top of the Ministry of Natural Resources.

18 Q. I apologize. Are you finished?

19 A. Yeah. Go ahead.

20 Q. When this Board promulgates its terms
21 and conditions, sir, subject to - I'm not going to be
22 lengthy on this - but subject to being overruled by
23 Cabinet or changed, this is going to be the way forest
24 management is going to occur in this province in the
25 future, and I'm suggesting to you, is it in your

1 professional opinion, as a professional forester, is it
2 your view that it is healthy to have a blanket term and
3 condition apply across the whole province without
4 respect to site and stand conditions and one that could
5 potentially remove the professional judgment of the
6 foresters of this province from that site? Is that
7 healthy?

8 A. For the forest? Healthy for the
9 forest, is that healthy, is that what you mean?

10 Q. We can say healthy for the people of
11 Ontario. Is that healthy for the people of Ontario; is
12 that your evidence?

13 A. No, I wouldn't say that's my evidence
14 and I don't think the -- in addition to the
15 silviculture rules, I would hope that the Board doesn't
16 come down with a number of inflexible rules that --

17 Q. I'm sorry, a number of...?

18 A. I would hope that the Board does not
19 come down with a number of inflexible rules that are
20 going to tie the forest down for the future because the
21 conditions change in the forest, our perception of the
22 forest changes over time, the demands of people change
23 for the forest over time. It makes it very difficult
24 at any one point in time to write rules that you're
25 going to follow, and I don't think the Board's going to

1 be writing the Ten Commandments.

2 Q. Well, they may not. I know they're
3 not going to write the Ten Commandments.

4 MS. SWENARCHUK: Mr. Cassidy --

5 MR. CASSIDY: I'm sorry, I apologize.

6 Q. You and I have got to get used to
7 each other, sir. I thought you were finished. I
8 apologize. Go ahead.

9 A. Well, I'm not too sure if we want to
10 get used to each other, but --

11 Q. Well, we are going to.

12 A. I don't think we will. Yeah, I do
13 hesitate and --

14 Q. I apologize. If You intend to
15 complete, just say let me finish. I apologize. All
16 right. Now --

17 MADAM CHAIR: Excuse me, the Board wants
18 some clarification, Mr. Benson.

19 Are you saying that the silvicultural
20 standards that we're looking at in Forests for
21 Tomorrow's document that, in your view, those
22 silvicultural standards should be put into place for
23 the present day and that over some period of time they
24 would likely change because foresters will know more
25 about the forest and there may be situations where,

1 once we have research about the effects of larger
2 clearcut size, then there will be general agreement
3 that, yes, clearcut size can be large and we will know
4 what those implications are?

5 THE WITNESS: I agree with most of that,
6 except I would think that in -- I would rely upon what
7 foresters could do at the present time for particular
8 areas where they can show what modifications they would
9 make to those terms and conditions for their particular
10 area, where they can do that now; in other areas they
11 probably wouldn't have the information to do that.

12 MADAM CHAIR: And how, with respect to
13 Mr. Cassidy's question, where is the forester able to
14 do that in these silvicultural standards now, if you
15 knew in fact that you could regenerate a 200-hectare
16 jack pine stand?

17 THE WITNESS: No, I agree, that
18 flexibility is not there now.

19 MADAM CHAIR: All right.

20 MR. CASSIDY: Q. Well, shouldn't there
21 be some flexibility, sir? As a professional forester,
22 don't you feel that?

23 A. Yes, that's -- but I'm still in
24 general agreement with them with...

25 Q. It would be a lot better though if

1 there was a term and condition entered in here that
2 gave some flexibility to that rather stark rule; don't
3 you agree?

4 A. I would agree to that point, as long
5 as it can be proven that that flexibility is
6 justifiable.

7 Q. In accordance with the planning
8 process?

9 A. Yes.

10 Q. And Ms. Koven was talking to you
11 about putting some -- in dealing with her scenario, was
12 talking about putting some rules in place but leaving
13 open the door to having them re-evaluate it down the
14 road either by some board or by foresters in some
15 fashion.

16 Would you agree, sir, that there is an
17 ongoing research into the whole forestry issue of
18 clearcutting, ongoing research into a whole variety of
19 forestry issues, and the day in which foresters ever
20 become certain of a lot of these issues such that they
21 can pass judgment is a long way off?

22 A. Okay. Before they can pass judgment
23 on whether one method is better than another?

24 Q. Yes. It's a long way off; isn't it?

25 A. --I think it really varies a fair bit.

1 In some -- in some areas the forests are more difficult
2 to regenerate than others.

3 Q. It depends on the issue?

4 A. The issue, the area, the species.

5 Q. Okay. And in many of those
6 circumstances we're talking about a state of level of
7 knowledge that is not going to be at a level you would
8 feel comfortable with in the next five years, the next
9 10 years, next 20 years, we're talking a long-term
10 approach towards forest research in many issues; are we
11 not?

12 A. In order to determine what the best
13 method would be for natural regeneration?

14 Q. Or the best methods for regeneration,
15 period.

16 A. I don't agree with that, no.

17 MR. MARTEL: Could I stop. I'm having
18 some trouble, and I've looked back in my notes just to
19 get a handle on all of this debate on size of clearcuts
20 and whatnot, and we seem to hang our hat on a hundred
21 plus.

22 I look at Sweden, I look at Finland, I
23 look at other jurisdictions, I look at the volumes that
24 are taken in each of these countries, if my notes are
25 correct, they have all seemed to outstrip Ontario,

1 Sweden and Finland at least, and I have some difficulty
2 of us getting so hung up as though the end of the world
3 existed on whether you get something beyond the
4 hundred, when in fact they seem to be taking as much or
5 more wood in Finland and Sweden per year.

6 I see Mr. Freidin shaking his head, but I
7 only know the notes that I took when we -- that's why I
8 said on Monday or Tuesday of this week, it's very
9 difficult to try to remember the evidence given by MNR
10 20 months ago and relate it to what's being given today
11 to try to put a handle on what you're trying to sort
12 out to reach a conclusion.

13 We get hung up on these things and I
14 guess what I'm saying is, why does -- it seems we're
15 intent on exceeding 100, maybe. I'm not sure, but...

16 MR. CASSIDY: Well, that wasn't the
17 evidence of my client.

18 MR. MARTEL: No, no, no, I didn't say
19 that, I'm just saying I'm listening to the
20 cross-examination today and the whole focus has been on
21 one hundred plus for various reasons.

22 I'm not disputing it wide openly, Mr.
23 Cassidy, I'm saying that you're suggesting there are
24 reasons with some legitimacy - I'm not arguing again
25 that - I'm just saying that the focus is there.

1 And I guess what I'm having difficulty
2 coming to grips with is, if you can cut more wood in
3 other jurisdictions with much smaller cuts, then why
4 does the focus zero in so much on the 100 plus? And
5 I don't know if that question can be answered.

6 Certainly you can't give evidence today,
7 but maybe somebody --

8 MR. CASSIDY: I'm not going to give
9 evidence to answer your question.

10 MR. MARTEL: I understand that.

11 MR. CASSIDY: I will be asking a few
12 further questions--

13 MR. MARTEL: That might clarify that.

14 MR. CASSIDY: --that might assist, but by
15 all means jump in if those questions don't do it for
16 you, Mr. Martel.

17 MADAM CHAIR: Excuse me. I would just
18 ask Mr. Benson one question, and I think Mr. Martel's
19 question presupposes that in other jurisdictions you
20 are cutting the same kind of wood or you are cutting a
21 similar volume.

22 Do you have any comments generally, Mr.
23 Benson, on why we wouldn't apply across the board
24 smaller clearcut standards that we might find operating
25 in European jurisdictions, for example. Without going

1 into a lot of details, but do you have some opinion on
2 that?

3 THE WITNESS: Their yields per hectare
4 can be higher in parts of Sweden and Finland and in
5 Alberta.

6 MR. MARTEL: Is that because of the type
7 of regeneration that's occurred, is that beyond natural
8 regeneration then, to exceed those limits?

9 THE WITNESS: It's more the climate soil
10 conditions--

11 MR. MARTEL: Fine.

12 THE WITNESS: --and particular species
13 that allows them that. Consequently there was that one
14 graph that was presented in the evidence that shows
15 that the harvesting costs level off after you harvest a
16 certain volume from an area. So theoretically then
17 once they can reach that volume level on a smaller
18 area, than say what we could in Ontario, and that may
19 have some effect.

20 The hundred hectare level should be more
21 than enough, I would think, to reach that particular
22 harvest level, where you would get that total volume
23 from an area to justify moving your men and equipment
24 to that area.

25 MADAM CHAIR: And you're looking in the

1 Ontario context when you say that?

2 THE WITNESS: In the Ontario context.

3 MADAM CHAIR: Yes.

4 MR. MARTEL: And that's your opinion once
5 again?

6 THE WITNESS: That's my opinion.

7 MR. MARTEL: That's fine. Thank you very
8 much.

9 MR. CASSIDY: Well, I will come back to
10 that later, a few questions about that, Madam Chair,
11 but I will come back to it on it.

12 Q. In dealing with another one of your
13 terms and conditions - and I will move away from
14 numbers here for a moment - we deal with a form of
15 harvesting and that is the one portion dealing with
16 black spruce stands on page 16, Mr. Benson. Do you see
17 that just above paragraph (b) there:

18 "In all black spruce stands with some
19 mixture of jack pine a large and
20 progressive three-coupe system shall be
21 used."

22 A. I see that.

23 Q. All right. Once again we see the
24 word shall there and we don't have a number here that
25 we get hung up on, we now have a type of harvesting.

1 And I'm asking you, sir, if that means
2 that in those stands that there absolutely has to be a
3 three-coupe system used?

4 A. The way it is stated there it says,
5 shall be used after three-coupes.

6 Q. And it -- my turn.

7 A. Right.

8 Q. And it refers to all black spruce
9 stands with that type of mixture; correct?

10 A. That's right.

11 Q. Now, that is without reference to
12 site conditions, stand conditions, soil conditions, a
13 variety of site-specific conditions are ignored now
14 pursuant to this term and condition; correct?

15 A. That's right, but it's considering
16 the site from the point of view of the mixture of
17 species involved on that particular site where you
18 would have jack pine and larch.

19 Q. Are you suggesting, sir, that that is
20 the only site-specific feature that the forester can
21 consider when dealing with that type of site and that
22 if he has equally valid reasons as a result of other
23 site factors for using another type of system, that he
24 must ignore his professional judgment and still follow
25 that?

1 A. No, I'm not suggesting that.

2 Q. Or would you agree that that is, in
3 fact, how it looks the way it's written there?

4 A. The way it is written there, that is
5 the way it looks, correct.

6 Q. All right. Well, why don't we
7 consider putting in an amendment to that term and
8 condition then which permits the forester to exercise
9 some greater professional judgment than the mere use of
10 the word shall. Would you agree with me that an
11 amendment of that type is in order?

12 A. I would prefer if you were going to
13 amend it to make an amendment that would cover the
14 whole kit and caboodle at one time rather than to
15 narrow it down to make it a separate amendment for each
16 one.

17 Q. What type of amendment would you
18 have, Mr. Benson?

19 A. Similar to what I said before, that
20 I'm -- and why I am general agreement with these
21 particular silvicultural rules, that the idea behind
22 them was to put a limit on the size of the clearcuts
23 and that the silvicultural rules as drawn up here were
24 drawn up to try to answer those particular questions.

25 And certainly trying to draw up

1 silvicultural rules for the whole Province of Ontario
2 for all the different working groups, all the different
3 site classes, if you really want to get down to it,
4 would require a great deal of detail, but I think that
5 these do set the point down there that we want to limit
6 the size of the clearcuts.

7 The details of it, again, I would rely
8 really upon the people with the experience and the
9 knowledge of the area, if it can be shown and proven
10 that they have a way to improve upon the method that is
11 down here as a shall.

12 Q. So in your view of how things should
13 proceed in the future with forests or timber management
14 in the province, you would like to see a term and
15 condition that allows for that type of discretion to be
16 exercised; am I correct?

17 A. That type of discretion where it can
18 be proven it can be done better.

19 Q. And in that circumstance the forester
20 could conceivably not harvest a black spruce stand with
21 some mixture of black jack pine or larch using just a
22 three-coupe system; correct, he could use some other
23 system?

24 A. Correct. He might find that it's
25 better with a four-coupe system.

1 Q. Or a clearcut system; correct?

2 A. It's possible it might happen that
3 way too.

4 Q. And with respect to the jack pine not
5 exceeding 100 hectares, coming back to the numbers -
6 I'm sorry, Mr. Martel, for a second - coming back to
7 that situation, it is entirely possible that if the
8 discretion was exercised in that fashion that you
9 described he should be allowed to exceed a 100 hectare
10 clearcut size; correct?

11 A. Not if you're following the general
12 concept that I stated; that is, to try to limit the
13 size of the clearcuts for a particular area.

14 Q. Well, I'm suggesting and we've just
15 been discussing the discretion of the forester, and you
16 said that the forester, if he can prove that it's a
17 better way to operate in his site-specific areas, can
18 exercise some discretion with respect to these rules.

19 And I want to know for the foresters of
20 the future if they can exceed 100 hectares if they can
21 prove to the satisfaction of whoever that there is a
22 better way to do it than 100 hectares.

23 Now, should that be the situation in the
24 future?

25 A. The future -- depends how you're

1 looking at the future, but right at the present time I
2 would say no, that they can't do that; again, with the
3 idea that you're trying to limit the size of the
4 clearcuts, not just from the regeneration point of view
5 but from the point of view of the other features of the
6 environment.

7 Q. So you see --

8 MR. MARTEL: Can I ask --

9 MR. CASSIDY: Certainly, Mr. Martel.

10 MR. MARTEL: Is that because you're
11 saying we don't know enough about the effects of timber
12 management on all the other resources that are out
13 there; in other words, it hasn't been documented
14 enough, for example, what the effects may be on
15 trappers or on trap lines or canoeists and whatnot?

16 THE WITNESS: Yes, and even on the site
17 itself.

18 MR. MARTEL: For ecological reasons.

19 THE WITNESS: What the erosion is from a
20 site, if it's 100 hectares or 101 hectares, is it a
21 significant difference or not. We don't have all that
22 material and data. I think some of those cut-off
23 points need to be determined.

24 And the 100 hectares, the way we set it
25 up, I think really my recommendation was to actually go

1 smaller than that, but they were also looking at the
2 point of view of practicality, that a company would not
3 want to cut smaller than a hundred hectares.

4 I think in some areas you might find that
5 a hundred hectares is too large an area for jack pine
6 for the site.

7 MR. CASSIDY: Q. And you might also find
8 that in some areas a hundred hectares is too small for
9 the site; correct?

10 A. Correct.

11 Q. And in that circumstance, however,
12 you would not allow the forester to exercise his
13 discretion and exceed the 100 hectares, notwithstanding
14 it's too small for the site; correct?

15 A. Well, that's right, and vice versa.
16 You could also have the situation where a hundred
17 hectares is too large and you might want -- it might
18 turn out to be 50 hectares, but those points need to be
19 determined.

20 But what this is doing is saying: Okay,
21 for now play it safe, play it conservative, set this
22 the limit; if we can prove otherwise - that's the
23 general disagreement I have - I think there needs to be
24 leeway, if it can be proved otherwise conclusively for
25 an area that the other uses are not going to be

1 affected or damaged as a result of cutting larger than
2 that, well then, it should be possible, yes.

3 Q. It should be possible to exceed 100
4 hectares in that circumstance; correct?

5 A. Correct, if it can be proven.

6 Q. All right. Taking into account the
7 local site-specific stand conditions and a host of
8 other factors relevant to the site; correct?

9 A. Correct.

10 Q. Relevant to the unit?

11 A. Right.

12 Q. Where is that in the terms and
13 conditions?

14 A. Well, again, it's not and that is why
15 I'm in general agreement with them.

16 Q. And you would like to see that
17 amendment to the terms and conditions; would you not,
18 so that you could be in full agreement with them?

19 A. No, I'm not really that worried about
20 it because I don't think the Board is going to accept
21 any one party's terms and conditions per se, I don't
22 know what the procedure is. I think the idea is, is to
23 present as many ideas and good ideas to them so that
24 they can make the decision as to what to do.

25 Q. Okay. I want to move into one

1 portion of your evidence dealing with this issue, and
2 that is --

3 MADAM CHAIR: I might just add, Mr.
4 Cassidy, it's very refreshing for the Board to hear
5 someone who isn't taking a strictly adversarial role,
6 Mr. Benson. Thank you.

7 THE WITNESS: I'm sorry.

8 MADAM CHAIR: The Board is impressed with
9 the fact that you're looking for the right answers or
10 the best possible solutions. We're often used to
11 hearing just adversarial points of view.

12 THE WITNESS: Well, it may come to that
13 I'm sure.

14 MADAM CHAIR: I'm sure it will.

15 MR. CASSIDY: I would just like to --

16 MR. MARTEL: Just think when the
17 negotiations start.

18 MR. CASSIDY: Q. I would just like to
19 move to Volume 270 of the transcript. I'm sorry, hold
20 on for a second. If I could just have your indulgence,
21 Madam Chair.

22 MADAM CHAIR: Do you need help finding
23 that reference, Mr. Cassidy?

24 MR. CASSIDY: No, Madam Chair.

25 - MS. SWENARCHUK: Hold it over until

1 Monday.

2 MR. MARTEL: Take a break.

3 MADAM CHAIR: When would you like to take
4 the afternoon break, Mr. Cassidy? Is this a convenient
5 time, or -- we normally take it at this time. It's up
6 to you.

7 MR. CASSIDY: I'm in the Board's hands,
8 whatever. Now's fine, Madam Chair.

9 MADAM CHAIR: Thank you.

10 ---Recess taken at 2:35 p.m.

11 ---On resuming at 2:55 p.m.

12 MADAM CHAIR: Please be seated.

13 MR. CASSIDY: Q. Okay. What I was
14 looking for, Mr. Benson, was your CV and resume on the
15 transcript, and it may be helpful for you to have that
16 in front of you. I'm not going to go into too much
17 detail, but I want to talk to you about, I believe this
18 is Exhibit 1609, Madam Chair. It's also contained in
19 the witness statement I believe.

20 MR. MARTEL: Found it.

21 MR. CASSIDY: Q. Now, as I understand,
22 just by reviewing your resume, Mr. Benson, am I correct
23 that you practised forestry with the Ministry in the
24 field from 1969 to 1974?

25 A. Yes, not all of 1969 though and, in

1 addition, I did do work for the Ministry in the summers
2 of '75, '76 and '77.

3 Q. Is that why you were in school, or is
4 that contract work while you were -- sorry, is that
5 contract work while you were teaching at the
6 university?

7 A. Yes.

8 Q. As I understand it then, that aside
9 from that summer work though the end of your full-time
10 involvement with the Ministry as a field practising
11 forester was over 16 years ago; is that correct?

12 A. That's correct.

13 Q. And since then you have taught at
14 Lakehead University; is that correct?

15 A. No.

16 Q. You commenced at Lakehead in 1975; is
17 that correct?

18 A. Correct.

19 Q. All right. So there was a year at
20 Sir Sanford Fleming in 1974?

21 A. Correct, 1974-75.

22 Q. Split?

23 A. The school year -- it's one year, the
24 school year is split.

25 Q. All right. So then am I correct that

1 you spent the fall -- from the fall of 1974 through to
2 the present, am I correct that you've spent your career
3 teaching at Sir Sanford Fleming College and Lakehead
4 University?

5 A. That's correct.

6 Q. Is it fair to say then that the
7 greater part of your career has been spent teaching and
8 not practising forestry?

9 A. I would think that would depend upon
10 how you define practising forestry.

11 Q. You're not practising -- you have not
12 practised forestry in the field while you've been
13 teaching; have you?

14 A. We do have field schools, we do have
15 field work that we do as a result of university and we
16 do contract work that can involve field work, we get to
17 travel sometimes and that can involve seeing items in
18 the field.

19 It's not the same as being a unit
20 forester by any means, but you're not excluded from the
21 field, but you certainly can't do everything all the
22 time in your life.

23 Q. Right. And, in fact, the thrust of
24 your career since 1974 has been to teach; is that
25 correct?

1 A. That's correct. Although I should
2 say at the university, it's divided into three
3 categories, and we are supposed to be good teachers,
4 good researchers and good community leaders.

5 Q. You have not been responsible
6 obviously for a management unit in a management
7 capacity as a forester since 1974; is that correct?

8 A. That's correct.

9 Q. And you have not written a timber
10 management plan; is that correct?

11 A. I have not -- an actual real live,
12 operating timber management plan, I never completed
13 one, I wrote parts of one but not a complete one.

14 Q. When was that?

15 A. The parts would be: In Kapuskasing
16 the plan was already written, what I was working on was
17 the operating plan, this would be under the old
18 management planning system. In North Bay I started
19 writing the Jocko Management Unit plan which no longer
20 exists as a management unit.

21 Q. And all of that would have occurred
22 prior to 1974?

23 A. That's correct.

24 Q. So you have not written a timber
25 management plan or a part thereof since 1974; is that

1 correct?

2 A. That's correct.

3 Q. Now, you have not, therefore, as I
4 understand it, been responsible for silvicultural
5 decisions in the field in a management unit since 1974;
6 is that correct?

7 A. Well, there was one small exception
8 was when I had the field school for planting trees on
9 part of the licence of Great Lakes and it was left
10 entirely under my supervision.

11 Q. With that exception you have not been
12 involved in management decision-making on the ground
13 with respect to silviculture since 1974?

14 A. That's correct.

15 Q. Now, the slides that you presented
16 are -- well, I'm sorry, if I can back up then.

17 As I understand it then, the total amount
18 of time that you have been involved in that type of
19 decision-making process with the Ministry, absent that
20 of the summer contract work is, by my calculation, five
21 years from 1969 to 1974; is that right?

22 A. As directly managing management
23 units, yes.

24 Q. The slides that you presented to the
25 Board for the most part dealt with site-specific field

1 situations of forestry practice or practices. Is that
2 a fair summation of most of your slides?

3 A. They dealt with some silvicultural
4 aspects, what was happening in the area and some other
5 harvesting aspects that were occurring in the area.
6 Those would be a very large part of the slides, yes.

7 Q. The majority?

8 A. The majority would be in those two
9 categories.

10 Q. Very site-specific oriented; is that
11 correct?

12 A. I wasn't looking at them as really
13 that site-specifically oriented, I was looking at them
14 more from the point of view of what was happening in
15 that particular management unit.

16 Q. What was the practice in that unit?

17 A. In that unit.

18 Q. Right.

19 A. What could I see as a result of the
20 management practices in that unit.

21 Q. And is it fair to say that you
22 disagreed with a lot of those management practices that
23 you saw going on in those management units?

24 A. I disagreed with a number of them,
25 yes.

1 Q. And yet for the past 16 years, Mr.
2 Benson, you yourself have had no practical
3 decision-making responsibilities for silviculture or
4 harvesting while you have been teaching; have you?

5 A. But with the one exception.

6 Q. Okay. Then I want to go back to the
7 experiences you had in the time you spent at the
8 Ministry from 1969 to 1974, and it may help you to look
9 to page 2 of your resume.

10 Am I correct, sir, that from 1969 to 1971
11 you were a unit forester for some four -- I apologize,
12 three management units in the Kapuskasing area?

13 A. That's correct.

14 Q. And you spent a total of, am I
15 correct, two and a half years there?

16 A. That would be correct, yes. Not
17 quite two and a half years.

18 Q. Okay. Less than two and a half years
19 there?

20 A. Less than two and a half. I arrived
21 in Kapuskasing the date they landed on the moon,
22 whatever date that was.

23 Q. I wasn't born. Then you moved -- all
24 right. So you spent less than two and a half years
25 working as a unit forester dealing with three units,

1 the northern, the Ontario Paper and the Opasatika
2 management units; correct?

3 A. Correct.

4 Q. And then you moved after that two and
5 a half years to North Bay and you dealt -- you had the
6 same position there as unit forester dealing with four
7 management units; is that correct?

8 A. Actually there was actually five
9 management units. There should be another one listed.

10 Q. Which one is that, sir?

11 A. The former Mattawa Management Unit.

12 Q. Okay.

13 A. But I would point out though that I
14 wasn't dealing with all five at any one time, the most
15 I would have been dealing with was four.

16 Q. The four listed there?

17 A. The four that are listed. Well, no,
18 it would not necessarily be the four listed in that
19 order, no.

20 Q. All right. In any event, there were
21 four units there that were under your responsibility as
22 unit forester when you were in North Bay; is that
23 correct?

24 A. There were four.

25 Q. And some connection with the fifth?

1 A. And of those four, there was some
2 variation.

3 Q. And by my calculations you would have
4 been there three and a half years; is that correct, Mr.
5 Benson?

6 A. That would be correct, yes.

7 Q. Okay. So we have you 16 years ago,
8 16 to 20 years ago practising forestry for two and a
9 half years in dealing with three units, and then three
10 and a half years dealing with four units. That would
11 suggest to me that you were dealing with several units
12 over a relatively short period of time. Is that fair
13 to say?

14 A. That's right, and some of them for
15 the complete length of time and some of them for a
16 short period of time.

17 Q. Mr. Benson, at the time that you were
18 working for MNR, was that a typical scenario, for a
19 unit forester to be in an area for that length of time
20 with that number of units?

21 A. It's really quite variable because
22 you had some foresters like George Marek that stayed in
23 the unit for a considerable length of time, and there's
24 others that were in the same situation and others that
25 moved around more rapidly than what I did.

1 Q. So you can't say that that was
2 typical?

3 A. Perhaps it might be average, but I
4 really don't know what the average would be at that
5 time.

6 Q. Do you have any feel for how that
7 length of tenure and number of units would compare now
8 to how MNR deals with foresters at the present day?

9 A. Well, again, how they deal with
10 foresters seems to vary somewhat. There is a tendency
11 for foresters to remain somewhat longer on the units
12 from what I hear, and whether they have the same area
13 to look after, I have heard that they have a little bit
14 less area to look after. They still have a fairly
15 large area to supervise the operations on, as far as
16 I'm concerned, the management planning operations.

17 Q. That's a pretty large area; is it
18 not, to cover three units in one case and four in
19 another?

20 A. Yes. Actually the Kapuskasing area
21 wise was probably larger than the North Bay wise even
22 though there were more --

23 Q. Even though there are fewer units?

24 A. Right.

25 Q. And would you agree, sir, and I think

1 you indicated earlier that it takes a period of time
2 for one to become familiar with a unit. Would you say
3 that that was a sufficient period of time for you to
4 become acquainted with those units?

5 A. I didn't feel comfortable. It varies
6 by unit, and if you want me to go through it that way,
7 that might explain it.

8 Of the management units in Kapuskasing, I
9 was most familiar with the northern management unit,
10 although I wasn't comfortable with it silviculturally.
11 Were the Opasatika Management Unit, I only saw it from
12 the air a few times because it wasn't accessible, so it
13 really wasn't much work to look after.

14 The Ontario Paper unit I had moderate
15 familiarity with that and there was a good technical
16 crew down there that shortened the time that it takes
17 to become familiar with the unit. So I felt moderately
18 comfortable really with that unit, even though I really
19 didn't visit it as often. It was easier silviculture
20 down there, it was just a matter of, well, how to get
21 at that.

22 The northern I knew better or for a
23 longer period of time but I didn't feel as comfortable
24 with it.

25 For North Bay, the Jocko unit, I spent

1 the majority of my time on that and I did feel
2 relatively comfortable with that unit at the end of
3 that particular time.

4 The Marten River I inherited in the last
5 year and cutting operations had pretty well finished
6 there, most of the unit had been cut, so I really
7 didn't feel comfortable with that unit.

8 The Gillies Unit I felt comfortable with
9 that because I managed the Jocko.

10 The Kiashke I didn't feel comfortable
11 with that one, it was another inherited one, and the
12 Mattawa unit, I felt relatively comfortable with it.

13 Q. You just indicated there was one unit
14 which you didn't feel comfortable with because most of
15 the harvesting already occurred. Is that the Marten
16 one?

17 A. The Marten River.

18 Q. To get the true understanding of an
19 area, would you agree as a practising forester and as a
20 person who can understand what is happening in an area
21 that it would be preferable for a person to have the
22 benefit of the experience of the full timber management
23 cycle from harvest through to regeneration and
24 regeneration results, would that give you the most
25 familiarity with the site?

1 A. You mean -- you don't mean to live
2 that long, but to see the harvesting to have a hand in
3 laying out the harvest operation and a hand in the
4 silviculture operation?

5 Q. Yes.

6 A. Ideally they should be that way, yes,
7 but at that time too I think one of the major
8 differences would be that silviculture was more of a
9 band-aid operation, what we called a band-aid operation
10 in most situations, where what you were doing was
11 trying to patch up cut-overs.

12 MR. MARTEL: How big a unit, in your
13 opinion, Mr. Benson, should a forester be responsible
14 for if he's going to do his job as thoroughly and as
15 professionally as possible?

16 Again, the type of information we get --
17 in Europe they've got I think it was 10,000 hectares or
18 something like that per forester, in Ontario -- or
19 50,000, I mean.

20 Mr. Freidin, I'm not quite sure, but
21 again history is passing me by, but in Ontario much
22 much more significant than that and, again, I hate to
23 give a figure, Mr. Freidin will have a breakdown or
24 something if I don't have the figure right on.

25 But the thing is, they're very very

1 different in the sizes that a forester is responsible
2 for, as I understand, at least in Europe and in
3 Ontario. And so I'm trying to get a handle on where --
4 what's workable for a professional forester to do the
5 best job possible, a size. I'm not sure you can do it,
6 but I ask.

7 THE WITNESS: I don't think I can do it,
8 except I know it would vary depending upon the amount
9 of workload involved in the management unit, and
10 certainly up in Kapuskasing at that time you could --
11 it would have been at that time preferable to have two
12 management units to really look after, the Opasatika
13 and one other one, which in effect would have been one
14 management unit.

15 As I said, at North Bay at that the time
16 I really specialized in the Jocko and the Mattawa and
17 the rest were not -- I just didn't have the time to
18 touch them.

19 MR. MARTEL: And what foresters are doing
20 today as opposed to 16 years ago, I would suspect the
21 workload for the forester has increased significantly
22 as we have moved into the forest management agreements
23 and the requirement for more data requirements.

24 I'm merely trying to get a handle on what
25 it is that a forester can do that protects everyone's

1 interest in a professional manner and the variance
2 between the two has been so great that I'm not sure how
3 one comes to that conclusion, unless we get some advice
4 from some of the foresters who are active.

5 THE WITNESS: And I don't think I could
6 give you the best advice on that, but I think it's an
7 important point.

8 MR. CASSIDY: Q. Just following up on
9 what Mr. Martel was asking there, I'm interested in,
10 since you have been on the area or since you have been
11 practising forestry in Kapuskasing in 1974, do you
12 think that there has been an increase in the number of
13 considerations and factors that the practising forester
14 has to take into account when dealing with
15 silvicultural decisions in his units when dealing with
16 harvest decisions and when dealing with the whole
17 variety of decisions that a forester has to make on his
18 unit?

19 A. The year is '71 for Kapuskasing, but
20 certainly since that time -- well, that's what this
21 whole thing is about, really, the increasing use
22 conflict over the forest. I mean, it's quite a
23 different ballgame now than what it was at that time as
24 far as managing the forest.

25 Q. Now, I would like to just confirm a

1 few things that I don't see in your resume, and I take
2 it you are not a wildlife biologist?

3 A. No, I'm not.

4 Q. You're not a fisheries biologist?

5 A. No, I'm not.

6 Q. You're not an engineer?

7 A. Not a professional engineer, no,
8 although I was an army engineer.

9 Q. You better not say that too loudly.

10 The result of that I guess then is that, Mr. Benson,
11 when you express opinions on wildlife habitat and road
12 engineering and road standards, fisheries habitat, you
13 are not expressing your expert opinions but you are
14 relying upon the opinions of others who are so
15 qualified in those fields; is that correct?

16 A. Yes, although I do throw in a bit
17 more of my own on the road part.

18 Q. There is a field of forestry called
19 forest engineering; is there not?

20 A. There is.

21 Q. And that deals -- that form of
22 forestry deals extensively with roads and road building
23 and road standards?

24 A. We don't teach that at Lakehead,
25 that's a course they teach -- or a degree program they

1 teach in New Brunswick and I'm not completely familiar
2 at this time with the course content.

3 Q. So you don't teach that type of
4 course?

5 A. No, I don't teach that type of
6 course.

7 Q. All right. And you wouldn't feel
8 qualified to teach that type of course, or you're not
9 even aware of what's in the course?

10 A. Well, I wouldn't -- that program -- I
11 don't know what courses are in that particular program,
12 so I can't really say.

13 Q. All right. And during the period of
14 time that you were practising in Kapuskasing, who had
15 responsibility for harvest operations during that
16 period of time, the Ministry or the companies operating
17 there?

18 A. For the harvest operations?

19 Q. Yes.

20 A. Do you mean the layout of the harvest
21 operation.

22 Q. Yes.

23 A. Okay. It depends upon the management
24 unit. You have two types of management units at that
25 time, Crown management units and company management

1 units, in Crown management units the unit foresters
2 were responsible for laying out the area to be
3 harvested; in the company management units, the company
4 generally laid it out and the annual plan and operating
5 plan received Ministry approval of that plan.

6 Q. And what about your experiences
7 there, were you involved in that harvest layout on any
8 of those units?

9 A. The units were -- the Crown unit,
10 yes, was the Northern one and the Ontario Paper one was
11 a company unit, so I was involved in both the company
12 and the Crown aspects, approval of the company and
13 approval -- actually, I'm trying to recall exactly how
14 they worked it.

15 We did have allocations in the Crown unit
16 to companies, smaller companies and that was about the
17 limit of your layout of the harvest, because then you
18 required them to make an annual plan, or at least I
19 did, to submit an annual plain which gave the details
20 of where they were going to put the road and how the
21 cutting operation was going to go. So you approved it
22 in their annual plan.

23 Q. But it was designed by the company;
24 is that correct? Yours was an approval function; is
25 that correct?

1 A. That's right.

2 Q. Those are both what one could call
3 Clay Belt forest units?

4 A. No, the Ontario Paper one was not,
5 that's down around Hornepayne.

6 Q. Yes.

7 A. And the Northern unit would be a Clay
8 Belt unit.

9 Q. And the time you spent in North Bay
10 you indicated that you were involved in strip cutting
11 on those management units; is that correct?

12 A. Strip cutting was confined to the
13 Jocko and the Kiashke management units and we did some
14 block cutting, small block cutting on the Gillies unit.

15 Q. Okay. Now, am I correct that you
16 have not been involved in harvest management
17 decision-making since 1974?

18 A. On actual management unit, no, but
19 while at Lakehead I have been involved every year in
20 having students prepare management plans, theoretical.

21 Q. Yes. I'm sorry, I'm talking about
22 practice here, practice being actual situations. Am I
23 correct in that context, that you have not been
24 involved in harvest management decisions since 1974?

25 A. That's correct.

1 Q. And the field of satellite imagery
2 interpretation is one where experts in fact do exist to
3 do that type of interpretation; is that correct?

4 A. That's correct.

5 Q. And you are not an expert in
6 satellite photointerpretation, I'm sorry, satellite
7 imagery interpretation?

8 A. No, I wouldn't say I was an expert in
9 that area, although I have done work for the Ministry
10 that involved that.

11 Q. But you would not consider yourself
12 an expert; is that correct?

13 A. No.

14 MR. CASSIDY: Now, if I might, Madam
15 Chair, I would like to go to one of the photos, and Ms.
16 Swenarchuk has arranged to have them put in the slide
17 projector, and if we could just go to that now.

18 Is it your intention to break at four
19 o'clock, Madam Chair?

20 MADAM CHAIR: Yes, it is, Mr. Cassidy.

21 MR. CASSIDY: Q. If we could commence by
22 looking at photo 121 again, Mr. Benson.

23 A. Photo 121.

24 MS. SWENARCHUK: It should be the first
25 one.

1 THE WITNESS: I don't see it on the list.

2 MADAM CHAIR: You run the risk of losing
3 some of your audience by turning the lights off this
4 late in the afternoon, Mr. Cassidy.

5 MR. CASSIDY: Q. That's photo 156. 121
6 is the satellite photo imagery, Mr. Benson.

7 MR. MARTEL: Did you memorize these?

8 MR. CASSIDY: By heart.

9 MS. SWENARCHUK: It may be the last one.

10 MR. MARTEL: I wondered when you said
11 156.

12 MR. CASSIDY: There we are.

13 Q. Now, Mr. Benson, you referred to this
14 photograph in your evidence with Ms. Swenarchuk and you
15 stated a size for the clearcuts on the Gordon Cosens
16 Forest and adjacent units that are depicted in this
17 photograph. Do you recall that?

18 A. Correct.

19 Q. Mr. Virgo here over in the corner has
20 been a management forester in that area for 22 years --
21 I'm sorry, 18 years, and the Board will recall that Mr.
22 Virgo was one of the escorts on the site visit to the
23 Gordon Cosens Forest.

24 His information is that 35 per cent of
25 the area you described as being clearcut on the Gordon

1 Cosens Forest -- I'm sorry, that 35 per cent of the
2 area you described on this photograph as being clearcut
3 is only Gordon Cosens Forest. Do you have any reason
4 to disagree with that?

5 A. 35 per cent of the area that I
6 described as clearcut is on the --

7 Q. Gordon Cosens Forest?

8 A. Gordon Cosens Forest. The two
9 questions I would have with that is, first, the obvious
10 one, what definition is being used for clearcut, I'm
11 sure we would disagree on that; and, secondly, to make
12 sure that we were looking at the same area.

13 Q. If I were to tell you that Mr. Virgo
14 simply used your definition of clearcut and picked out
15 the areas which you indicated as being cut and then
16 found the Gordon Cosens Forest on here and subtracted
17 all of the other adjacent units which you referred to,
18 would you be in a position then to agree with that
19 figure? In other words, he accepted your definition of
20 clearcut.

21 A. Right. And I'm assuming that he saw
22 the areas -- all the areas that I showed that I used in
23 that particular measurement.

24 Q. Right. And if that was also true,
25 you would agree with that figure?

1 A. If that was true, yeah.

2 Q. So that in fact the other 65 per cent
3 of this photograph would be on parts of the area that
4 is not the Gordon Cosens Forest, that would follow?

5 A. Under those conditions, right.

6 Q. And my information from Mr. Virgo is
7 that the other parts of this photo include adjacent
8 Crown units and freehold lands. I think that is
9 consistent with your information as well; is that
10 correct?

11 A. Yes. I didn't say Crown units, I did
12 say freehold lands and other management units..

13 Q. Okay. Just bear with me. Are you
14 aware that there are adjacent Crown units on this
15 photograph?

16 A. I wasn't aware. I didn't really look
17 at whether they were Crown or company when I looked at
18 the area involved.

19 Q. I see. You tried to identify the
20 Gordon Cosens Forest though; didn't you, on this
21 photograph?

22 A. I did put boundaries on the maps. I
23 tried -- I didn't -- when I looked at the clearcut I
24 was going to break it down by company, but eventually I
25 decided to look at it as one complete unit.

1 Q. All right. Well, your Part II of
2 your witness statement deals with various units and you
3 did break it down by units there and you called it the
4 Gordon Cosens Unit.

5 Is that the case that this photograph
6 does not refer just to the Gordon Cosens unit, it
7 refers to things beyond the Gordon Cosens unit?

8 A. That's correct.

9 Q. And that in fact the clearcut figure
10 that you suggested applied to the whole of this
11 photograph and that any suggestion that that clearcut
12 figure was only for the Gordon Cosens Forest is wrong;
13 am I right?

14 A. Yes. I wasn't -- I don't think I --
15 and it certainly wasn't my intent to say that that
16 figure was for the Gordon Cosens Forest alone.

17 Q. So I am informed by Mr. Virgo that he
18 looked at this photograph and has determined that the
19 freehold land. Which I think we can also call
20 privately held or privately owned land, makes up about
21 31 per cent of the land depicted on photograph 121.
22 Are you in a position to disagree with that?

23 A. No, but I would accept the work that
24 Mr. Virgo has done. From what I understand, just to
25 - clarify, he didn't use the satellite image but used the

1 actual cut-over maps for the area.

2 Q. No, he used this satellite image
3 which is what you used when you were describing the
4 figure?

5 A. Oh, so basically the measurements
6 were the same procedure as I used?

7 Q. Yes.

8 A. Okay.

9 Q. And I want to clarify one thing, it
10 was the amount of cut-over in this photograph, 31 per
11 cent of it, the amount of cut-over that you described
12 using your definition of clearcut. Mr. Virgo
13 calculated that 31 per cent of that lies on freeload
14 land.

15 A. Okay.

16 Q. So we have 35 per cent on Gordon
17 Cosens Forest land, 31 per cent of the cut-over on
18 freehold land which is owned by several different
19 companies, and the remainder on Crown management units.
20 Do you accept that, Mr. Benson?

21 A. 37, 31 and whatever left is on --

22 Q. 35, 31.

23 A. 35.

24 Q. And the balance on other Crown units.

25 A. So the balance would be 34 per cent

1 on other Crown units.

2 Q. There may be various types of Crown
3 units in there as well. We will call them Crown units
4 for this point, okay?

5 A. Okay.

6 Q. Yes?

7 A. Yes.

8 Q. Now, various light green areas on
9 this satellite imagery, the lighter green areas, did
10 you interpret to be cut-over areas - and I'll give you
11 an example.

12 This light green area up here, these two
13 light green areas up here, and by up here I mean the
14 right-hand side of the photograph approximately midway.

15 Do you want to get closer.

16 A. I don't think it would help getting
17 closer, I would have to check the map to see whether
18 that was mapped. When I did the checking back and
19 forth I used the direct image and not the projection to
20 determine which areas were mapped, and I can't answer
21 that right now then for sure.

22 Q. All right.

23 A. But what I could say that for sure
24 that the areas that are pinkish in colour, I generally
25 included those as the more recent cut-over areas or the

1 more recently disturbed areas, and the procedure then
2 when you got into the rest, into the lighter coloured
3 areas, they were included as cut-over if you could see
4 the presence of a harvesting operation that is, or
5 silvicultural operation by the lines produced by the
6 roads or the harvesting pattern.

7 Q. Yes.

8 A. And that was the basic type of
9 separation that was made.

10 Q. All right. So that where you saw
11 lines, for example, I'm looking at the middle of this
12 photograph toward the left of the photograph, you see a
13 series of lines coming out in the form of almost stick
14 shape lines or spider leg lines for lack of a better
15 word, that would automatically tip off to you that
16 there might be cut-over there?

17 A. No. In that case that looks like the
18 area that they're going to cut. If I recall - I think
19 I showed the example for the area in the mid-left, the
20 area that was used for the one-year clearcut exercise.

21 Q. Yes.

22 A. Where I had the satellite photograph
23 of before the cut with the roads laid out and the
24 satellite photograph -- a photograph of the satellite
25 image of the area--

1 Q. Yes.

2 A. --after it had been harvested.

3 Q. Is that that pinkish area on the left
4 that I'm pointing to?

5 A. That's correct.

6 Q. That's a budworm salvage operation;
7 was it not?

8 A. That I don't know.

9 Q. Well, if it were you would have no
10 objection to that harvesting in that area for budworm
11 salvage; would you?

12 A. To harvesting in that area in the
13 particular manner in which it was done?

14 Q. Yes.

15 A. I would have to take a look at the
16 area in more detail and what the working group
17 composition was to qualify that.

18 Q. Right. Would you be able to give me
19 an answer if you were to go back and review over the
20 course of the weekend the cut-over map that you
21 reviewed or that you looked at of that budworm area?

22 A. Well, what I mean by looking at the
23 map, where was the budworm damage, what's the real
24 species composition of that area, was the whole area
25 budworm damaged, was it necessary to cut the whole

1 area. That would be one basic question I would ask.

2 MADAM CHAIR: Wouldn't your interest, Mr.
3 Benson, also be in what would happen to that area in
4 the future; in other words, you don't object to
5 salvaging budworm damaged wood, but you might have some
6 objection to clearcutting nearby areas around it in the
7 future with your concern about diversity?

8 THE WITNESS: That's right, and also
9 within that spruce budworm area, did it all have to be
10 cut, that's what I would like to try to determine.

11 MR. CASSIDY: Q. All right. I want to
12 show you an area on the photograph of that spruce
13 budworm area and that's the pinkish area, Madam Chair,
14 that Mr. Benson indicated on the left-hand side of
15 photo 121 approximately midway, closest to the
16 left-hand side.

17 And I've already given you a copy of this
18 aerial photograph, Mr. Benson. If you want to haul
19 those out, I'll make sure you have the right one in
20 front of you.

21 MS. SWENARCHUK: Do you have copies of
22 those, Mr. Cassidy?

23 MR. CASSIDY: Coming.

24 Q. Now, this aerial photograph I'm
25 informed was taken at a scale of -- these aerial

1 photographs were taken at a scale of 1:50,000. Is that
2 what they appear to be, in your view, Mr. Benson, or
3 are you able to tell?

4 You may want to have the light on for
5 this part:

6 A. I would have to check it out to be
7 sure, but --

8 Q. You would have no reason to disagree
9 with Mr. Virgo if that was the case?

10 A. No.

11 Q. All right. Now, what I would suggest
12 you do, Mr. Benson, is hold the two photographs like
13 this in just the fashion I gave you, so that the
14 portion that appears to be harvested appears about
15 midway between the two photographs. Do you have it in
16 that fashion?

17 A. Okay.

18 MADAM CHAIR: So we're looking at the
19 left portion of photo 121?

20 MR. CASSIDY: Yes, that's the pink
21 portion where Mr. Virgo is indicating.

22 MADAM CHAIR: Thank you.

23 MR. CASSIDY: Q. All right. Now, the
24 pink portion is the budworm salvage operation and the
25 1:50,000 map shows the degree of residuals present,

1 what I've just put in front of you; would you agree? ..

2 A. Yes, but this is of the lower portion
3 of the pink area there, not the whole pink area there.

4 Q. Yes, correct. And the scale of the
5 photograph that you took or the imagery from the
6 satellite is 1:1,000,000?

7 A. Correct.

8 Q. So that if someone were doing photo
9 satellite imagery interpretation, is it fair to say
10 that by looking at that pink portion they would not see
11 the residuals which are depicted in the 1:50,000 aerial
12 photograph which I just demonstrated to you?

13 A. No, certainly wouldn't have it to the
14 same resolution.

15 Q. And so that would you agree that the
16 1:50,000 photograph gives you a better idea of the
17 amount of residuals left after the harvest than the
18 satellite image?

19 A. Yes, it can.

20 Q. All right.

21 MR. CASSIDY: Madam Chair, if we can mark
22 these two as the next exhibit, and I would suggest if
23 you have a stapler you simply staple the two together.

24 MADAM CHAIR: Exhibit 1638.

25 MR. CASSIDY: And we can call this a

1 1:50,000 map of the 1:50,000 photo of budworm salvage
2 operations depicted in photo 121.

3 ---EXHIBIT NO. 1638: 1:50,000 map of the 1:50,000
4 photo of budworm salvage
operations depicted in photo 121.

5 MR. CASSIDY: Q. Now, this is the bottom
6 end of that salvage operation. There is a salvage
7 operation above that as well, it's in the north. Is
8 that fair to say, to your knowledge?

9 A. To my knowledge, I don't know. It
10 wasn't identified in the clearcut exercise as being
11 there for salvage.

12 Q. But there is a cut-over north of this
13 and you're not sure why, but you know there is a
14 cut-over north of this; is that right?

15 A. There's a lot of cut-over north of it
16 and I'm sure that all that cut-over wasn't budworm
17 salvage.

18 Q. Okay. Now, when you did your
19 calculation of what was in or what was part of that
20 area you called a cut-over, you did that after
21 transferring your interpretation of the satellite
22 imagery on to cut-over maps; am I correct?

23 A. I determined the area after I did the
24 transfer?

25 Q. Yes.

1 A. No.

2 Q. So you did the determination before
3 you put the cut-overs on to cut-over maps?

4 A. In most cases, yes, and for this one
5 I did it that way, I would have determined the area
6 prior to having put the lines on the map.

7 Q. But if you included in your
8 calculation an area that was cut-over, it would show up
9 on your cut-over maps subsequently as being cut-over;
10 correct?

11 A. Are you referring just to this
12 particular one, or to the whole set?

13 Q. Let's do both, the whole set first.

14 A. Generally I tried to measure the
15 larger areas to get an indication of what the areas
16 were involved and then the cut-over areas were
17 transferred to the maps so I could check the larger
18 areas.

19 Now, in some cases some of the cut-over
20 areas have not been transferred to maps.

21 Q. Right.

22 A. In a couple of cases some information
23 was transferred to the map that was not cut-over,
24 but...

25 Q. If a portion of this forest that you

1 marked on the cut-over maps has been cut-over, would
2 that portion be included in your calculation into the
3 figure you arrived at as to the size?

4 A. For this particular area I'm not sure
5 that I had all the maps transfer the area to for this
6 one, what I was using the maps for was to make a check
7 as to where the creeks were, where the rivers were, so
8 I could try to relate that to the satellite image,
9 rather than use the maps as the method for determining
10 the area involved.

11 Q. Okay. Mr. Benson, I'm interested in
12 the area just to the south of this pink area you've
13 been talking about that is depicted here.

14 A. The area you pointed out is to the
15 west.

16 Q. Does this photograph run north/south?

17 A. Not exactly, no.

18 Q. All right. Well, let's try left and
19 right. I'm interested in the area just to the left of
20 the pink area that you've described as being disturbed.

21 A. Okay.

22 Q. Was that area included in your
23 calculations?

24 A. Would you point it out again.

25 Q. Sure. It's just to the left of the

1 pink area.

2 A. May I come up and take a closer look
3 at it.

4 Q. Sure.

5 A. Yes, which would have included that
6 area.

7 Q. Okay. Now, don't go away. The area
8 to what would be the south over here and right below
9 it, and I will try and point that out on here for the
10 benefit of the Board.

11 MS. SWENARCHUK: Could you stand back,
12 please.

13 MR. CASSIDY: Q. Just here to the left
14 or below this area on photo 121, did you include that
15 in the calculation?

16 A. By that area, do you mean how much of
17 that area?

18 Q. That block right there. (indicating)

19 A. That block right there, yes.

20 Q. So that was included in the cut-over
21 calculation?

22 A. That's right.

23 Q. Now, it's Mr. Virgo's understanding
24 and belief that that block right there, Mr. Benson, is
25 in fact the portion of the 1:50,000 map which we just

1 made an exhibit which does not appear to be harvested.

2 Are you in any position to disagree with
3 that and I'm referring to the portion immediately below
4 what appears to be the harvested area?

5 A. The one with the small swamp in the
6 middle of it in there?

7 Q. Yes.

8 A. I would have to check that out for
9 sure, but the way it was pointed out on the map I would
10 have to say that I included it.

11 MR. MARTEL: How big an area are we
12 talking about?

13 MR. CASSIDY: 1600 hectares. 1600
14 hectares.

15 Q. On the assumption that Mr. Virgo is
16 correct, and I'm prepared to call evidence if Ms.
17 Swenarchuk requires about this in reply, and I can also
18 advise the Board that this photograph was taken at the
19 time of the satellite image photograph that you took,
20 that is July of 1989, that that area was in fact not
21 harvested.

22 A. And the area of that was 1600 --

23 Q. Hectares. Now, if you wish to think
24 about that over the weekend, Mr. Benson, I'm going to
25 leave you with the suggestion that you're welcome to do

1 so, but I'm suggesting that you have made a
2 photointerpretation, satellite image error and included
3 that in the calculation?

4 A. Oh, I wouldn't deny that I have done
5 such a thing and I'm sure you could find numerous areas
6 there where I've made a mistake that way, and I -- you
7 know, the area -- I don't -- as I said before, I don't
8 think the area figure is that important as the number
9 in itself.

10 What I think is important is the layout
11 of the cut overall and the pattern of the cut-over and,
12 as I said before too, I think the number unfortunately
13 has -- became a main issue rather than the pattern of
14 the cut-over.

15 And if I admit quite freely, you don't
16 have to go to a lot of trouble to prove that I could
17 make errors in interpreting the satellite photograph
18 and doing some misinterpretation.

19 But I can't help but look at that area
20 and say, there is a large area there that was clearcut
21 and that it could have been cut in a different manner
22 to create more of a habitat pattern for wildlife and to
23 create better conditions for the protection of the
24 other environmental features.

25 MR. CASSIDY: Those are my questions for

1 today, Madam Chair. I suggest we break and come back
2 on Monday.

3 MADAM CHAIR: Thank you. Mr. Cassidy,
4 how much longer will you be in your cross-examination?

5 MR. CASSIDY: Madam Chair, in the scoping
6 session I said a day to two days. At this point I
7 anticipate taking the full two days, but of course we
8 will see what we can to shorten it up.

9 That would put me complete by Tuesday at
10 noon, and I will be done by Tuesday at noon and I hope
11 to shorten it up even further.

12 MADAM CHAIR: Mr. Freidin, you'll be
13 prepared to start on Monday if Mr. --

14 MR. FREIDIN: Ms. Seaborn will.

15 MADAM CHAIR: Excuse me, yes. Ms.
16 Seaborn, how long are you going to be in
17 cross-examination?

18 MS. SEABORN: I believe my estimate,
19 Madam Chair, was half a day. I will be less than half
20 a day, and hopefully just one to two hours.

21 MADAM CHAIR: You'll be prepared to start
22 on Monday if Mr. Cassidy should finish?

23 MS. SEABORN: Yes. It sounds like he's
24 not going to finish until noon on Tuesday, but I'll be
25 ready to go on Monday in the event he's finished.

1 MADAM CHAIR: Okay. Mr. Freidin, you
2 will be prepared to follow immediately?

3 MR. FREIDIN: Yes.

4 MADAM CHAIR: And what was your estimate?

5 MR. FREIDIN: Two to three days. I'll
6 still stick with that.

7 MADAM CHAIR: We were curious because we
8 won't be sitting on January the 21st, I think is the
9 date Mr. Benson won't be available.

10 MR. FREIDIN: Right. It's looks like
11 we'll finish just in time to do Mr. Maser.

12 MS. SWENARCHUK: Well, if there are -- I
13 would be prepared to commence the Panel 7 witnesses.
14 Certainly if there are two days left in that week, I
15 may only start one.

16 MADAM CHAIR: Yes, we sit three days next
17 week and the following week.

18 MS. SWENARCHUK: The following week would
19 be three as well.

20 MADAM CHAIR: Yes.

21 MS. SWENARCHUK: I guess I lost count at
22 some point.

23 MADAM CHAIR: When did you anticipate
24 finishing --

25 MR. FREIDIN: I have got my weeks mixed

1 up as well.

2 MS. SWENARCHUK: So I assume Tuesday,
3 I'll take Wednesday, Thursday, I make take the
4 following Tuesday, maybe Wednesday, re-examine perhaps
5 Monday.

6 So let's say we finish Tuesday, so that
7 leaves us two days of that week which we can consider.

8 MADAM CHAIR: And you're prepared to
9 start Panel 7?

10 MS. SWENARCHUK: That's right.

11 MADAM CHAIR: All right. Thank you, Ms.
12 Swenarchuk. That is what we will do.

13 Thank you, Mr. Benson.

14 ---Whereupon the hearing was adjourned at 4:00 p.m, to
15 be reconvened on Monday, January, 14th, 1991
commencing at 9:00 a.m.

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